SCHOOL MANAGEMENT

November 1961

Education Library

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your teachers

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your space

How to check drop-outs SIX CASE HISTORIES

THINGS YOUR PUBLIC OUGHT TO KNOW

How to increase your tax base

WHY TEACHER RECRUITING FAILS

SEE COMPLETE CONTENTS ON PAGE 2

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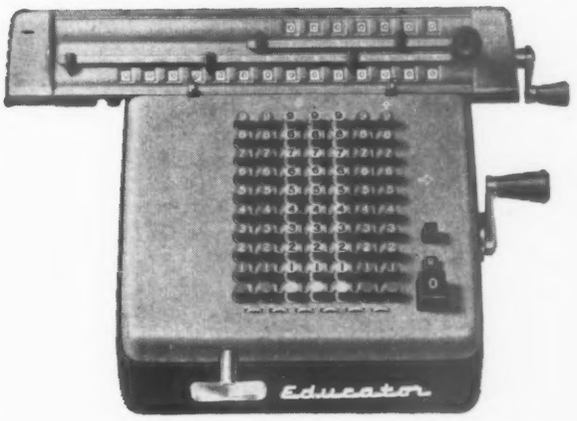

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SCHOOL MANAGEMENT

November 1961

Features

Increase your tax base: How to bring new industry to your town 37

When choosing a new location, industry is often more interested in how much you spend on education, than in how much it will spend on land, construction and taxes.

How to introduce team teaching to your school 58

Whether or not teachers accept a new idea may determine if it succeeds or fails. Here's how one school is introducing a new concept—and building—to its teachers.

How to make research worthwhile 63

Educational research is plentiful, but you may waste time unless you know where to find the information you need. Here's how a new service points you in the right direction.

Why your college recruiting fails 65

What is—and is not—important to a teacher candidate? How can a college placement office help you? This article answers these, and many other crucial questions.

How television can train your teachers 70

Here's how 21 districts are cooperating with a college to use television for in-service training. These programs are helpful, convenient and inexpensive.

How your district can check drop-outs: six case histories 73

The increase in drop-outs has become a national problem, but very few districts are doing anything about it. Here's how six schools have started taking some action.

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VOL. 5 NO. 11

Short Reports

Books 89

The new role of books in the schools, now that automated teaching is here.

Feeding 98

How a snack bar served lunch daily until a new cafeteria was built.

Attendance records 103

How clerks and student volunteers relieve teachers of bookwork.

Departments

Letters 8
Where to get help 16
Yours for the asking 32
News of the schools 45
Thought starters 109
Food clinic 116
Press releases 128
Reader service section 135

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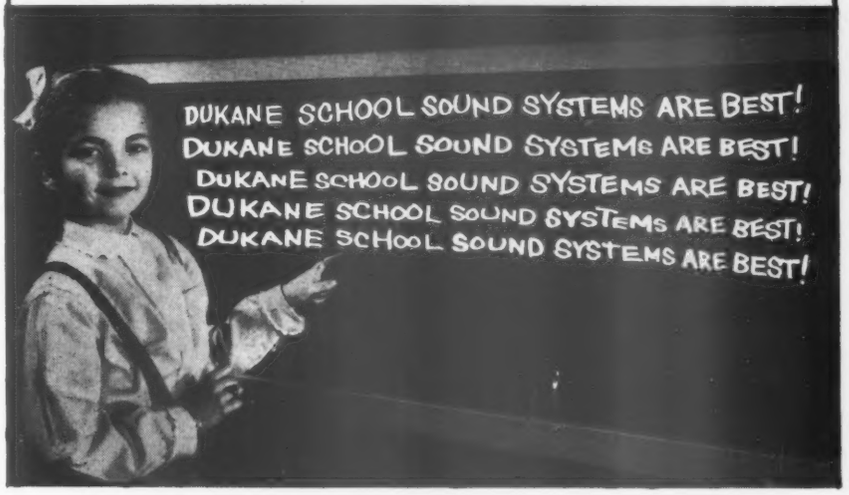
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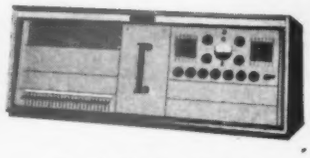

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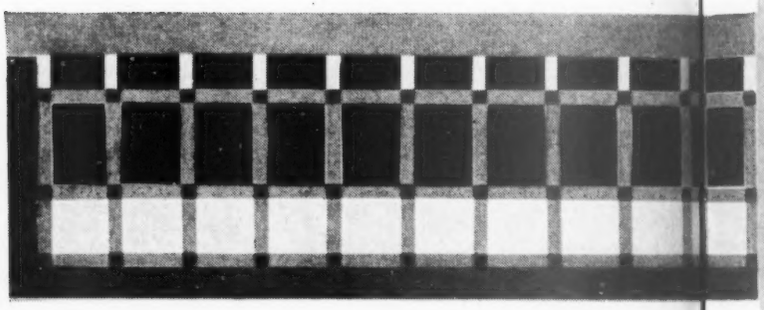

air environment

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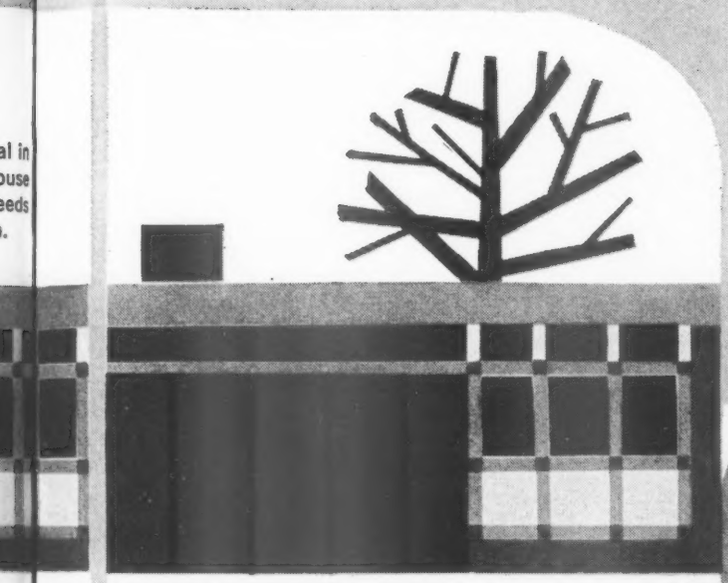

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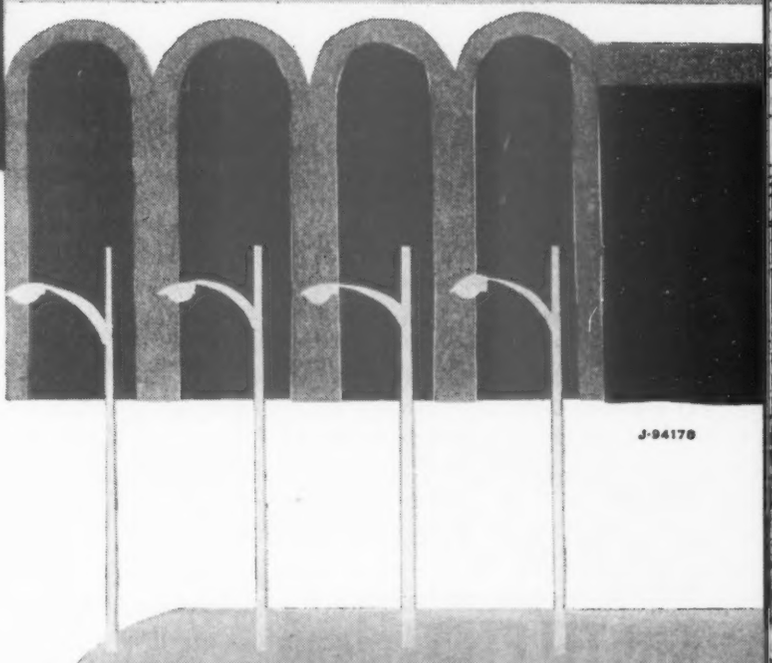

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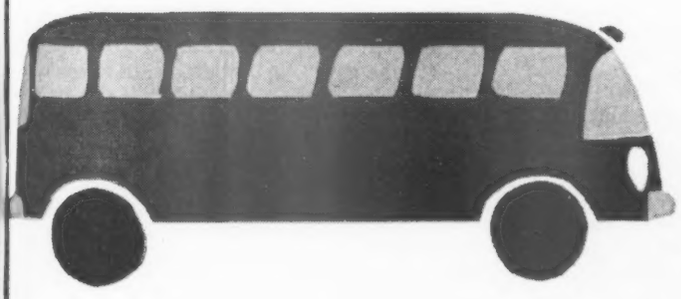

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LETTERS

A sampling of correspondence across the editor's desk

Limited supply

SIR: We appreciate the honor bestowed on our publications in your September issue. Your announcement brought a deluge of requests for copies of our materials from all parts of the United States. [The Hayward Union High School District won a citation for outstanding achievement for its curriculum brochures and an honorable mention for its recruiting brochure. ED]

The limited supply we had on hand made it impossible to comply with all requests. Consequently, we decided to send copies to colleges and universities making requests. We hope others interested will have an opportunity to see copies on display at these schools.

L.R. RAMM
DISTRICT SUPERINTENDENT
HAYWARD UNION HIGH SCHOOL DISTRICT
HAYWARD, CALIF.

Picking an architect

SIR: I wish the task of selecting an architect were as simple as Dr. George Fitch of Greenburgh, N.Y., makes it appear from his point system scale for ranking architects (*"How to hire the "right" architect, SM, Sept. '61*). In my opinion, after having worked with more than 150 architectural firms, the probability of Greenburgh getting an outstanding $3.5 million junior-senior high school is not good for the following reasons:

■ Many fine architectural firms (Mies van der Rohe for instance) do not maintain a large staff; consultants are retained as they are needed. It is next to impossible for the design architect to retain personal control of a project in a very large office. Many of the details get lost with the draftsmen. (Yamasaki and Bill Caudill, I have observed, are the two exceptions to this statement.) The details are seldom coordinated with the working drawings.

■ The assumption that a school board is competent to select an outstanding architect is questionable. The board should have the responsibility of making the final appointment, but with the advice and assistance of someone with considerably more experience in this sort of thing than the board has had.

In my opinion, some sort of evaluative criteria for school buildings and architects, that consider aesthetics, building location, site utilization, relation of program to building, flexibility, maintenance, environmental factors and economy, should be given top priority in sizing up a building or an architect.

The two architectural consultants that I think are most important in planning a school building are the landscape architect and the color consultant and these were not given special consideration in the ranking. Whether they are members of architectural firms or have a private practice is unimportant. It is my opinion that the possibility of producing outstanding results usually comes from a consulting firm outside the architect's office.

One last concern—we are not going to make much improvement in our school building until school administrators, teachers and the public have a better understanding and appreciation of a good school program and beauty in architecture. Improvements shall not come from more and better rating scales or checklists. These have been tried for years with poor results.

HAROLD SILVERTHORN
BUILDING CONSULTANT
NORTHSHORE SCHOOL DISTRICT
BOTHELL, WASH.

Architects aren't hired

SIR: In reference to your story "How to hire the right architect for your district," allow me to point out that professional services are engaged or retained.

HARRY D. PAYNE, AIA
HOUSTON, TEX.

How about an index?

SIR: Has anyone called your attention to a desirable feature found in many magazines, that is, an annual index? Since most of SCHOOL MANAGEMENT's articles are specific, informative and pertinent, we have found ourselves referring to them frequently. An index would really help us in utilizing the information you provide.

MARTIN J. STEINDLER
PRESIDENT, BOARD OF EDUCATION
SCHOOL DISTRICT #162
COOK COUNTY, ILL.

■ *Unfortunately, the size of our staff does not permit us to index our articles. However, we are listed in the* Education Index. ED.

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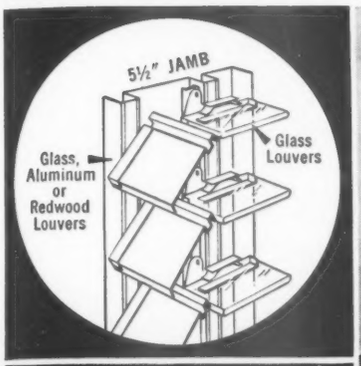

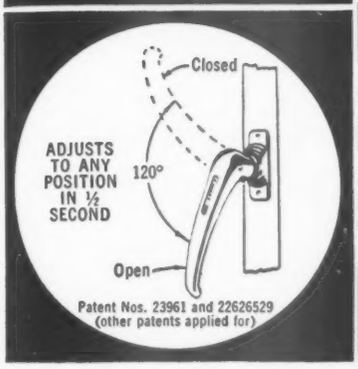

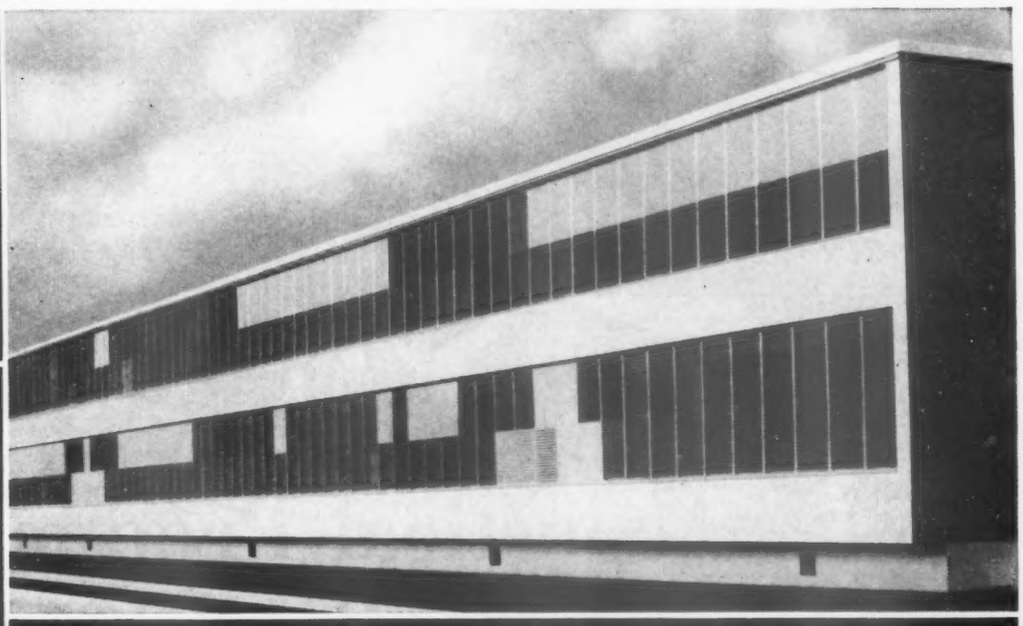

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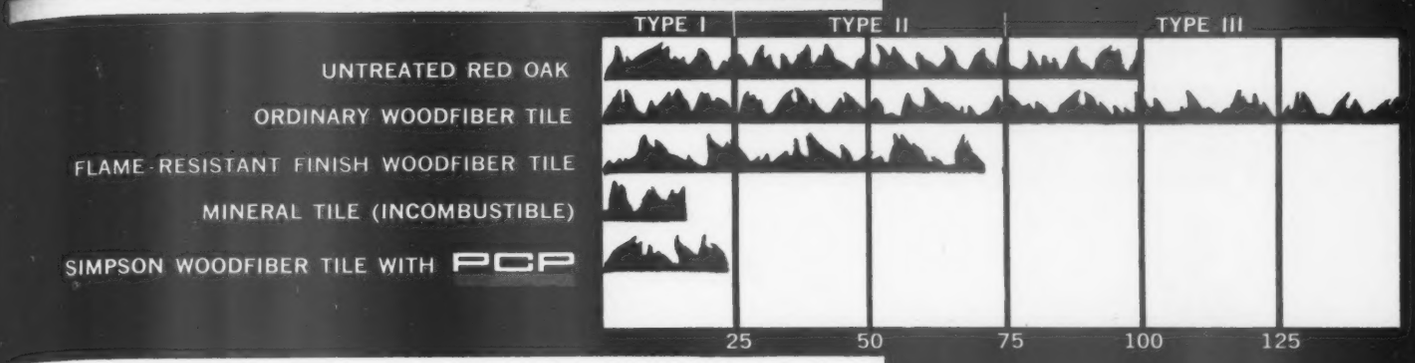

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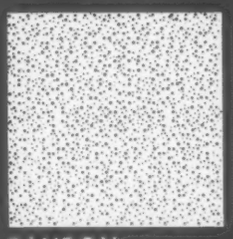
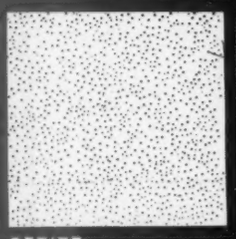
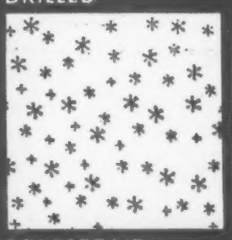
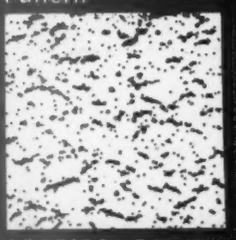
PCP performance was confirmed in the Flame Tunnel Test, results of which are shown above. Note the almost indistinguishable difference between Forestone with PCP (bottom line) and mineral tile (second from bottom).

The Simpson Certified Acoustical Contractors listed here will be pleased to show you samples and demonstrate the efficiency of the complete line of Simpson acoustical products with amazing PCP. Before your next job call the one nearest you. All are listed in the Yellow Pages under "Acoustical."

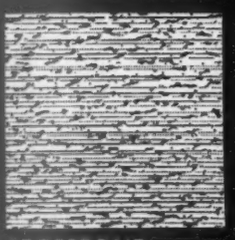

RANDOM DRILLED


PETITE Pattern


FORESTONE STARLITE


FORESTONE FISSURED

FORESTONE DRIFTWOOD


FORESTONE STRIATED

NEBRASKA
LINCOLN
M & J Lathing Co.
OMAHA
Kelley Asbestos Products Company
NEVADA
LAS VEGAS
Nevada Building Specialties, Inc.
RENO
Tuck's Supply Company
NEW JERSEY
FAIRVIEW
Kane Acoustical Co., Inc.
NEW MEXICO
ALBUQUERQUE
Fiberglas Engineering & Supply
NEW YORK
ALBANY
Davis Acoustical Corp.
BUFFALO
Davis-Fetch & Co., Inc.
ITHACA
Rochester Davis-Fetch Corp.
JAMESTOWN
Davis-Fetch & Co., Inc.
LYNBROOK, L. I.
Robt J. Harder, Inc.
ROCHESTER
Rochester Davis-Fetch Corp.
SYRACUSE
Davis-Fetch Acoustical Corp.
NORTH CAROLINA
ASHEVILLE
The Bonitz Insulation Co.
CHARLOTTE
Bost Building Equipment Co.
GOLDSBORO
The Bonitz Insulation Co. of Eastern Carolina, Inc.
GREENSBORO
The Bonitz Insulation Co.
NORTH DAKOTA
FARGO
Dale Tile Company
MINOT
Benton Lathing Company
OHIO
AKRON
Acoustical Contracting & Supply Corp.
CINCINNATI
Cincinnatti Floor Co.
CLEVELAND
Acoustical Contracting & Supply Corp.
COLUMBUS
Buckeye Acoustical Corp.
SPRINGFIELD
Field & Associates
YOUNGSTOWN
Acoustical Contracting & Supply Corp.
OKLAHOMA
OKLAHOMA CITY
The Denman Company
Scovil & Sabbett Inc.
TULSA
Oklahoma Ac. & Specialties Co.
OREGON
PORTLAND
Harver Company
SALEM
Elfstrom & Eyre, Inc.
PENNSYLVANIA
PHILADELPHIA
General Acoustics Inc.
PITTSBURGH
Davis-Fetch Corp. of Penn.
Standard Floor Company
SOUTH CAROLINA
COLUMBIA
Bonitz Insulation Co. of South Carolina
GREENVILLE
Bonitz Insulation Co. of South Carolina
TENNESSEE
KNOXVILLE
Anning-Johnson Company
MEMPHIS
Alexander Marble & Tile Co.
TEXAS
AMARILLO
Jenkins Brick & Supply Co.
DALLAS
Blue Diamond Company
EL PASO
Ken Turner Company, Inc.
FORT WORTH
Builders Service Co.
HOUSTON
General Supply Company, Inc.
Schwarz-Jordan, Inc.
MIDLAND
Modern Floors & Paints
SAN ANTONIO
General Supply Company, Inc.
VIRGINIA
ARLINGTON
K-M Acoustical Inc.
CHARLOTTESVILLE
Manson & Utley, Inc.
NORFOLK
Manson & Utley, Inc.
RICHMOND
Manson & Utley, Inc.
WASHINGTON
SEATTLE
Elliott Bay Lumber Company
SPOKANE
Fiberglas Engineering & Supply
WASHINGTON, D. C.
Lloyd E. Mitchell, Inc.
WEST VIRGINIA
CHARLESTON
Asbestos & Insulating Co.
WISCONSIN
APPLETON
Building Service, Inc.
MILWAUKEE
Building Service, Inc.
WYOMING
CASPER
Construction Specialties
CANADA
ALBERTA
CALGARY
F. Drexel Co. Ltd.
EDMONTON
F. Drexel Co. Ltd.
BRITISH COLUMBIA
VANCOUVER
F. Drexel Co. Ltd.
VICTORIA
F. Drexel Co. Ltd.

6860/S1A14

Dick Hasbrouck brings 8 years experience to Michigan schools. Today he calls on Tappan Jr. H. S. in Ann Arbor.

A man like

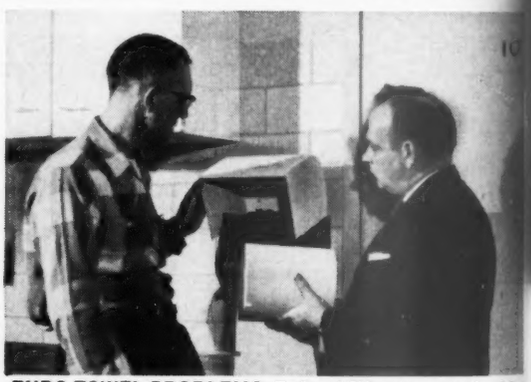
Dick Hasbrouck

can be your authority on school sanitation and maintenance problems

He is one of West Chemical's 457 school experts who offer you free personalized technical service

SHOWER ROOMS CLEAN AND GERM FREE. Hasbrouck shows Head Custodian Al Ward how hospital-proved Wescodyne® kills germs as it cleans, prevents cross infection—everything from staph to athlete's foot. Non-toxic Wescodyne costs less than 2¢ a gallon at dilution, is also used in washrooms, cafeterias.

MAPS OUT GYM-FLOOR STRATEGY. Dick meets with Supt. of Buildings Wuster (left) and Maintenance Supv. High to develop efficient program. Custom plan improves all phases—sealing, finishing, maintenance.



ENDS TOWEL PROBLEMS. Roland Wuster gets inside look at Westroll cabinets (loaned free) which are jam-proof, meter-out Westroll towels economically—cut paper towel costs up to 40%.

A technical expert like Dick Hasbrouck can analyze your requirements, help you get more for your maintenance budget. He's experienced at solving problems with an efficient West Maintenance Program. He works with your staff — gives free instruction, free supervision and free periodic follow-up.

He can guarantee improved appearance and higher sanitation standards . . . and show you how to *reduce* maintenance costs! For full information write your nearest West office or West Chemical Products, Inc., 42-16 West St., Long Island City 1, N. Y. In Canada, 5621-23 Casgrain Ave., Montreal.

America's foremost specialists in school sanitation and maintenance

WEST CHEMICAL PRODUCTS INC.

(Circle number 763 for more information)

the turning point in the teaching of typing

You are looking at the IBM SELECTRIC Typewriter, newest addition to the IBM typewriter line. The unusual object above it is its typing element. No bigger than a golf ball, this single element makes possible the fastest, easiest way to teach typing, brings new economy to modern teaching methods.

Eliminates distractions! Precision-engineered, this single typing element does the work of a basketful of typebars. (Typebar tangles that so often slow down and confuse the student are completely eliminated.) Skimming across the paper just as your hand does when you write, it prints characters faster than the eye can see, eliminates the need for a moving paper carriage. Result: No distractions to keep students from concentrating on fundamentals. With no carriage jutting beyond the typewriter, the full-size SELECTRIC requires less desk area too.

Builds confidence! In many other ways the IBM SELECTRIC helps improve typing speed and technique, makes even beginning students more proficient. For example, a unique storage system actually remembers—when necessary—one character while another is being printed, paces it out at a measured rate to level "typing flurries," improve typing rhythm.

Conversion to other typewriters, incidentally, is accomplished in just minutes, because the SELECTRIC keyboard arrangement is essentially the same despite the many other features that make the SELECTRIC so different.

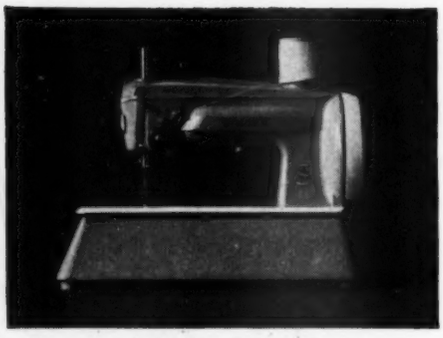
Minimum downtime! The IBM SELECTRIC is remarkably rugged. With a single typing element instead of multiple typebars, and a stationary paper carrier, maintenance requirements are kept at a minimum.

Moderate cost! We urge you to have the moderately priced IBM SELECTRIC shown in your school soon. We think you will agree that this newest development from IBM research is an important milestone in classroom progress. **IBM**

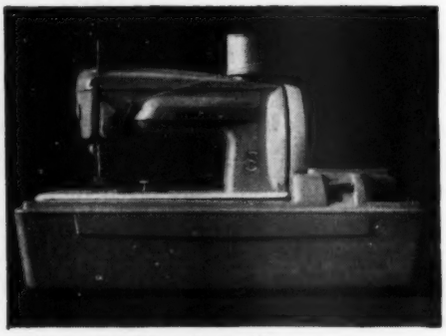
A NEW KIND OF TYPEWRITER...A NEW WAY TO WRITE!

(Circle number 732 for more information)

For ages 3-7, New TRIMHANDY* machine...cuts out paper dolls...all kinds of paper creations! Guiding paper under presser foot prepares for real sewing.



For ages 6-9, New SEWHANDY* machine . . . makes real stitches on real fabrics for doll clothes and gifts. Even clothes for herself!



For ages 10 and up, New SEWHANDY Electric . . . with stitch control. Frees right hand for more intricate sewing.

LOOK WHO'S LEARNING ON A SINGER MACHINE NOW!

Today, even pre-schoolers are learning the fun of creating things.

Focusing the eye on the cutting line and turning the wheel of the TRIMHANDY machine prepares a young lady for the next step . . . real sewing, like Mommie does.

With the SEWHANDY machine she learns to thread the needle and make real stitches. Working on doll clothes teaches her basic garment construction. Then on a SEWHANDY Electric machine she can use both hands for more intricate work.

Starting the "high schoolers of tomorrow" *today* is another aspect of our broad educational program. Why not ask your nearby SINGER SEWING CENTER to demonstrate these new machines for you?

SINGER* SEWING CENTERS

Listed in your phone book under SINGER SEWING MACHINE CO.
*A Trademark of THE SINGER MFG. CO.

(Circle number 754 for more information)

MORE NEW PRODUCT DEVELOPMENTS by Hobart

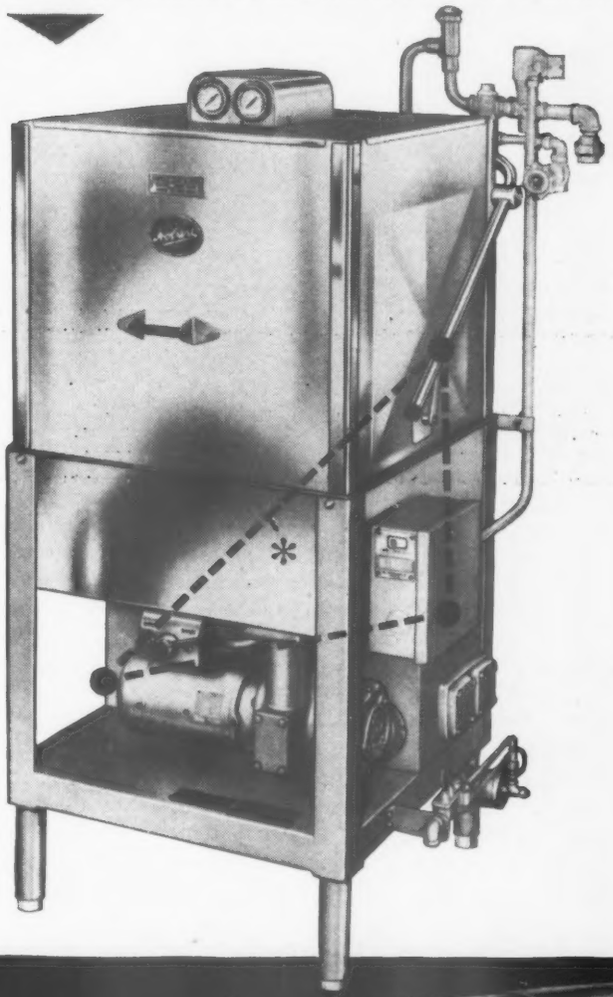
Here are the newest kitchen machine developments by Hobart, all field-tested and perfected to give you greater savings per serving. They are the result of the constant market and engineering research and product progress that make Hobart machines your best buy for greatest food-service efficiency.

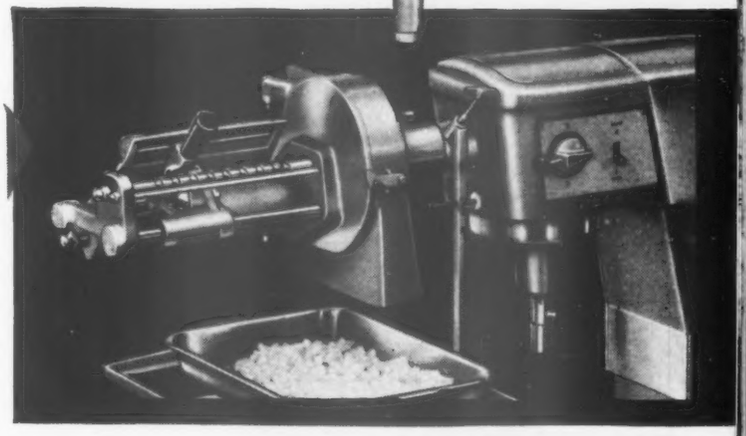
NEW 20-QUART FLOOR TYPE MIXER. The most popular bench mixer ever built is now also available as a floor-type mixer—the Hobart A-200-F. Here is efficient working height with the space-saving and convenience of floor operation, plus the Hobart 20-qt. mixer.

The new A-200-F incorporates all the performance-proved Hobart mixer features—positive drive, positive speeds, positive Hobart planetary action—that assure positive results. Clean-lined design assures the utmost in sanitation. All controls centralized. This mixer is also available with timed operation and stainless metal finish.

NEW AM SERIES DISHWASHERS WITH THE TimeSaver Triangle *

A new high in dishwashing performance and convenience. Revolutionary door lift—no chains, pulleys or door weights inside or out. You can raise the doors with your finger tips—it's that easy. Drain control is raised to convenient working height—stooping is part of the past. Waist-high wash-and-rinse control switch completes the TimeSaver Triangle—making operation faster and easier. Many more features, such as removable stainless steel rack tracks, sanitary legs, eye-level thermometers, high-efficiency motor and pump, and more. The biggest surprise: the low original and ultimate cost. Available for straight-through or corner installation.





NEW POWER DICER ATTACHMENT. Here's new versatility for a Hobart mixer or food cutter—the new Power Dicer attachment. Now vegetables can be diced (also firm fruits like apples) and French fries cut as efficiently as with machines costing hundreds of dollars more! Top dicing quality and productivity—without sacrificing valuable work space. Several sizes of grids—readily adapts for ½-, ⅜-, or ¼-inch dicing or cutting. Smooth dicer lines make cleaning easy.

ATTACHMENT TRAY SUPPORT. Available for use on Hobart mixers and food cutters when using attachments. Attaches and detaches in seconds, stores easily out of the way.

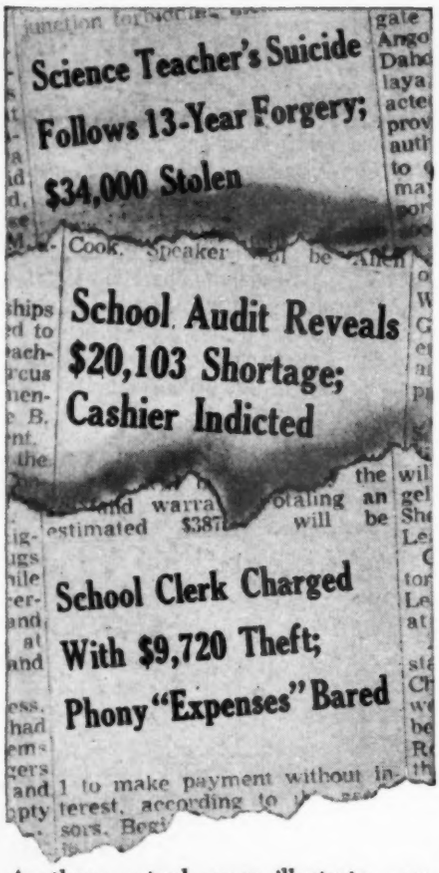
The Hobart Manufacturing Company, Dept. 309, Troy, Ohio

Nationwide Factory-Trained Sales and Service...over 200 offices

Hobart® machines

A Complete Line by the World's Oldest and Largest Manufacturer of Computing Scales, and Food Store, Bakery, Kitchen and Dishwashing Machines

(Circle number 727 for more information)


Science Teacher's Suicide Follows 13-Year Forgery; $34,000 Stolen
School Audit Reveals $20,103 Shortage; Cashier Indicted
School Clerk Charged With $9,720 Theft; Phony "Expenses" Bared

As these actual cases illustrate, you will find dishonest individuals even in school systems. But there are many safeguards you can use to protect your operation. For instance, examine the endorsements on returned checks for a period to determine possible forgery. Also, investigate the advantages of bonding *everyone* who handles school funds – official, teacher or student.

Ætna Casualty has a new free booklet giving many useful suggestions on how to safeguard your school system against dishonesty. Send for your copy *today.*

Let this New FREE Booklet suggest ways to protect your school system

Ætna Casualty and Surety Company
Dept. SM-11, Hartford 15, Connecticut
Please send me without obligation a copy of "How to Guard Against Dishonesty In Your School System."

Name_____

Address_____

City_____

State_____

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(Circle number 701 for more information)

SM WHERE TO GET HELP

A guide to useful information

AUDIO-VISUAL

Guide to materials and services. This reference work is a guide to newer educational media catalogs and lists, services of professional organizations, and professional journals which systematically provide information on the subject.

Included are lists of catalogs and services concerning 16mm motion pictures, 35mm filmstrips, slide films, kinescopes, tape recordings, phonograph records, radio and educational television.

GUIDES TO NEWER EDUCATIONAL MEDIA. *The American Library Assoc., 50 E. Huron St., Chicago, 11. 74 pages. $1.50.*

ELEMENTARY EDUCATION

Home and school. Here's a book which can be helpful to parents, teachers and administrators. Dubbed "the parents' common sense guide to sound elementary education," it tells what should be accomplished by the schools, and what must be supplemented by the home.

The author, William H. Armstrong, says that every parent must develop his child's interest in learning, and direct his home study time properly. Most of the book's suggestions are very old, but as the author says, "They are time-honored and in no sense obsolete."

The author also writes: "The most important thing happening in American education today is what is being done at school and in the home for the elementary child . . . if we want the best for our children, we must honestly admit that school reform will never replace the home as an educative factor. And we must devote some of our time to specific ways in which parents can provide the best for their child's education."

EIGHTY-SEVEN WAYS TO HELP YOUR CHILD IN SCHOOL. *Barron's Educational Series, Inc., Great Neck, N.Y. 256 pages. $1.95. Paperback.*

TEACHERS

Evaluating performance. The problem of determining teacher competency is not new to schoolmen, but it is one that defies solution. "More than half a century of research on the subject has not yielded meaningful, measurable criteria (for performance appraisal) around which the nation's educators can rally."

That's the theme of this booklet, a joint publication of the American Association of School Administrators, the NEA's Department of Classroom Teachers, and the National School Boards Association.

Teacher performance is not a clearly defined quality, but is "one of the most complex of human phenomena." Research has not produced the necessary knowledge, and there are no dependable yardsticks in use today.

This publication won't tell you how to evaluate your teachers, but in summarizing what research has been done, it discounts several commonly held conceptions about teacher performance. For example, health, educational background, preparation, age and knowledge of subject matter appear to be relatively unimportant factors in most cases of unsuccessful teaching. The chief causes of teacher failure, and the areas in which future research might be directed, are a teacher's inability to maintain discipline in a classroom, and his lack of cooperation with supervisors and administrators.

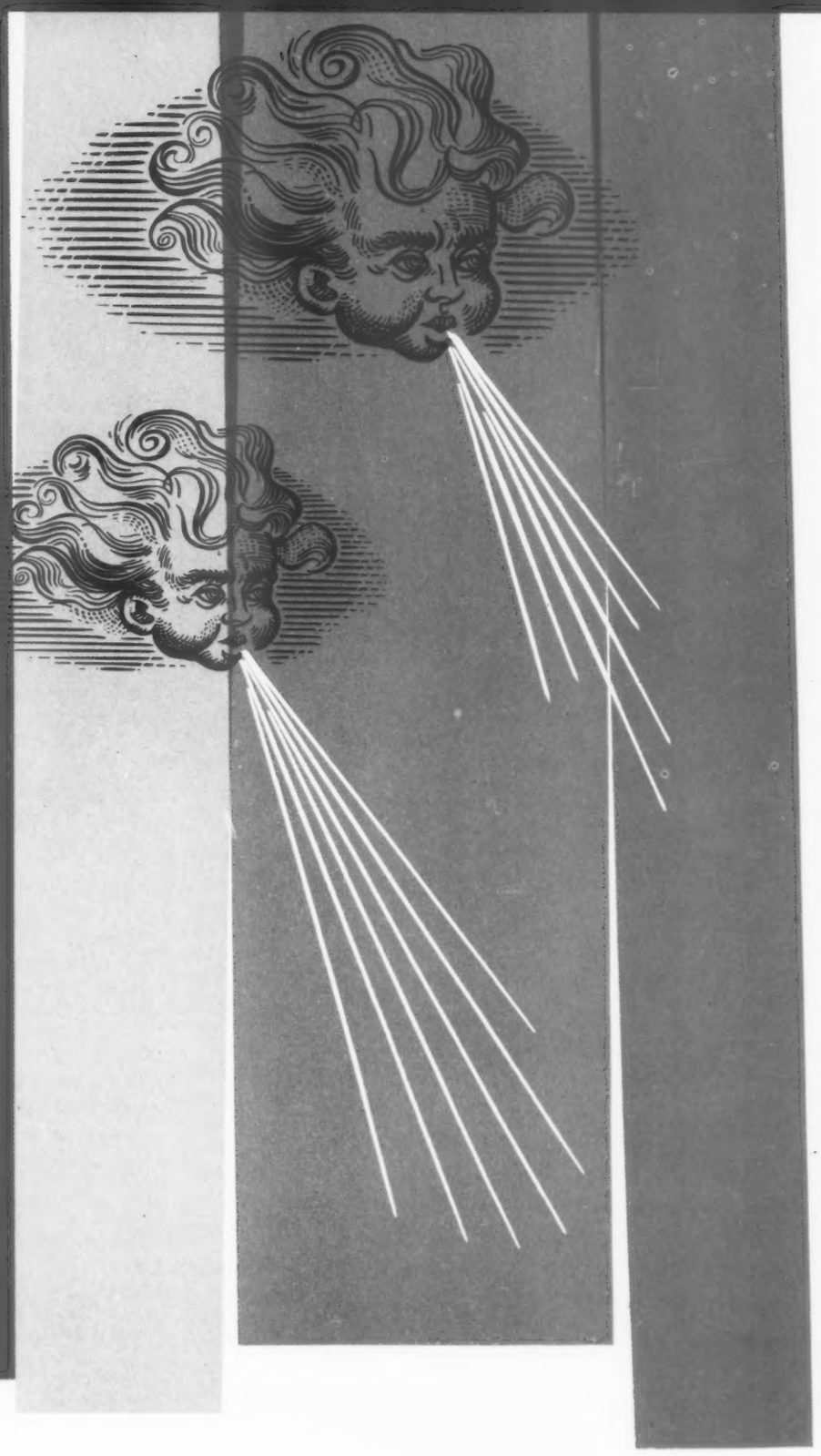
WHO'S A GOOD TEACHER? *AASA, or Department of Classroom Teachers, NEA, 1201 16th St. NW, Washington 6, D.C. Also from NSBA, 1940 Sheridan Road, Evanston, Ill. 54 pages. Single copy, $2. Discounts on quantity orders.*

ADMINISTRATION

National responsibility. "School administration can become a profession whose voice can help to guide national decisions in matters of public policy." This statement by Francis Keppel, Dean of the Harvard Graduate School of Education, is the theme of a new pamphlet published by the New England School Development Council.

Dean Keppel says that professional education groups are ordinarily more intent on their own, rather than on the national, welfare. He hints that this shortsightedness is a

continued on page 25



A special report on

ARMSTRONG VENTILATING CEILINGS

A remarkable new plenum-engineered ventilating system

ARMSTRONG VENTILATING CEILINGS

their advantages

1. A completely proven ceiling ventilating system

This new air-diffusion system is essentially an air-inlet system, employing a ceiling with thousands of perforations through which conditioned air is pushed from the plenum. Armstrong Ventilating Ceilings have been thoroughly lab- and job-tested. The engineering bases for this new kind of ventilating system have been fully developed for virtually all types of structures. Ventilating Ceilings have been used by a number of architects in a variety of different jobs. One of them — the Battle Creek Country Club — is shown at right. Some other recent jobs are listed on the last page of this report.

2. Shaves construction costs, cuts ductwork, eliminates diffusers

An Armstrong Ventilating Ceiling performs three essential functions: air diffusion, sound absorption, decoration. And when you use Armstrong Fire Guard in a Ventilating Ceiling, you can add a fourth function: time-design-rated fire protection. Since the plenum chamber acts as the room duct in an Armstrong Ventilating Ceiling, and since one duct stub is sufficient for most plenum chambers, much of the supply ductwork is eliminated. So are the diffusers, because the ceiling itself serves as the diffuser. In both new construction and remodeling, these two things alone offer appreciable cost savings. An Armstrong Ventilating Ceiling often permits the use of a shallower plenum than the conventional air-inlet system. This, too, saves money, by enabling you to have the required number of floors with less total building height.

3. Provides a handsome acoustical ceiling

Because an Armstrong Ventilating Ceiling eliminates the need for diffusers—or other noticeable air openings—it provides new opportunities for creative effects. In the Battle Creek Country Club, shown at right, the architects have created distinctive character with a giant-coffered ceiling, incorporating Ventilating Tile. In each tile, the tiny ventilating perforations account for two per cent of the surface. And they're virtually invisible, because they're part of the over-all pattern. Ventilating Ceilings are available in a number of different designs, in both tile and lay-in units, so you can select the one that best meets your aesthetic needs.

Renderings by Ara Derderian

ARMSTRONG VENTILATING CEILINGS

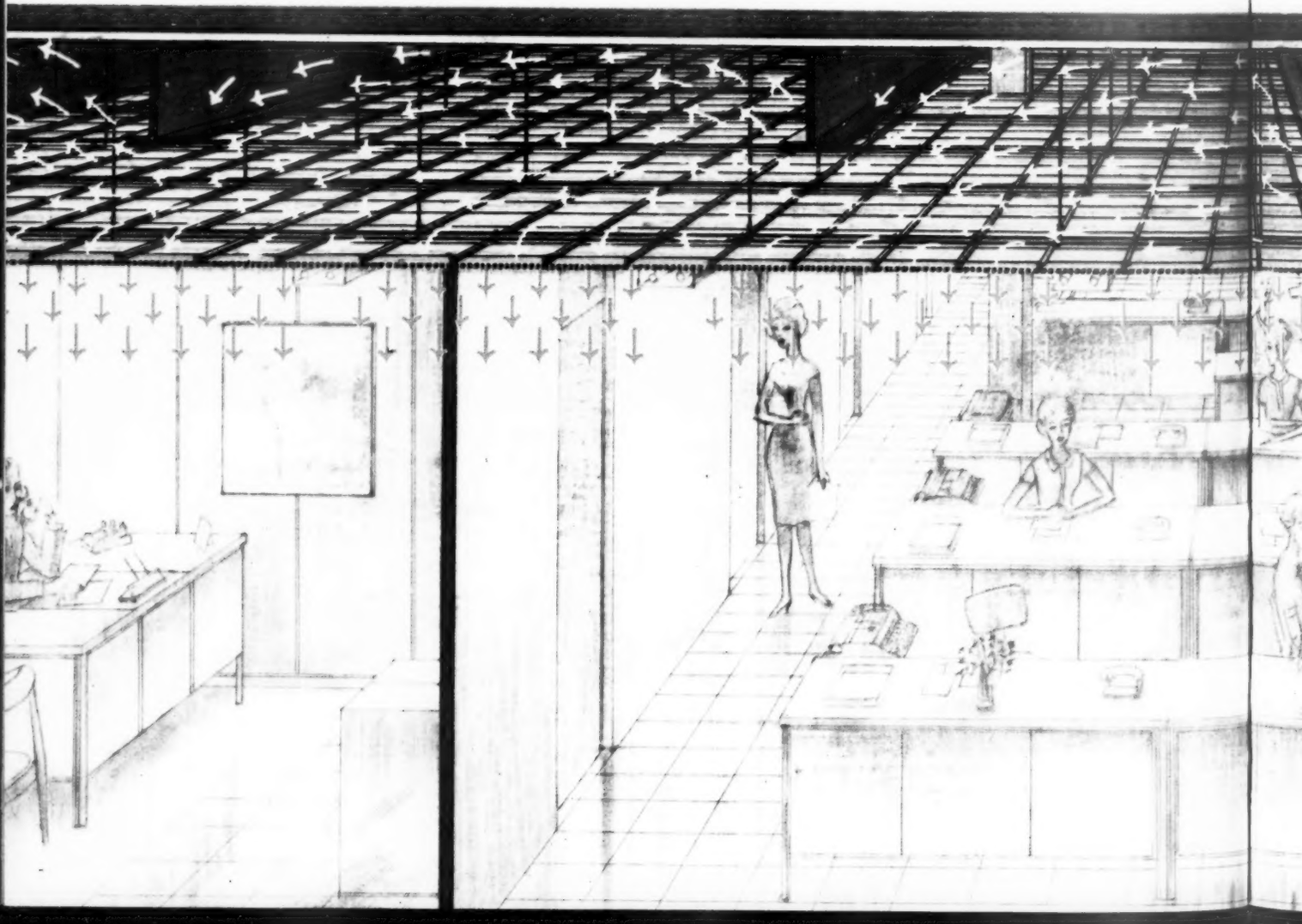
their functions

1. They air-condition—providing uniform air diffusion

Since the ceiling itself serves as a diffuser, an even flow of air is provided into and throughout the room. An Armstrong Ventilating Ceiling enables you to eliminate drafts and stagnant areas. Even in low-ceiling areas, draft problems can be eliminated. The picture below of a section of an office building shows how conditioned air is forced, under pressure, from the central unit through ducts to the duct stub supplying each plenum chamber. The result—comfort for all occupants.

2. They're self-cleaning—the down pressure provides a perpetual barrier against dirt and dust

Besides cooling or heating, the air forced through the perforations in an Armstrong Ventilating Ceiling repels dust and dirt, since there is a continuous flow of air flowing downward from the ceiling. The ceiling is, in effect, self-cleaning.

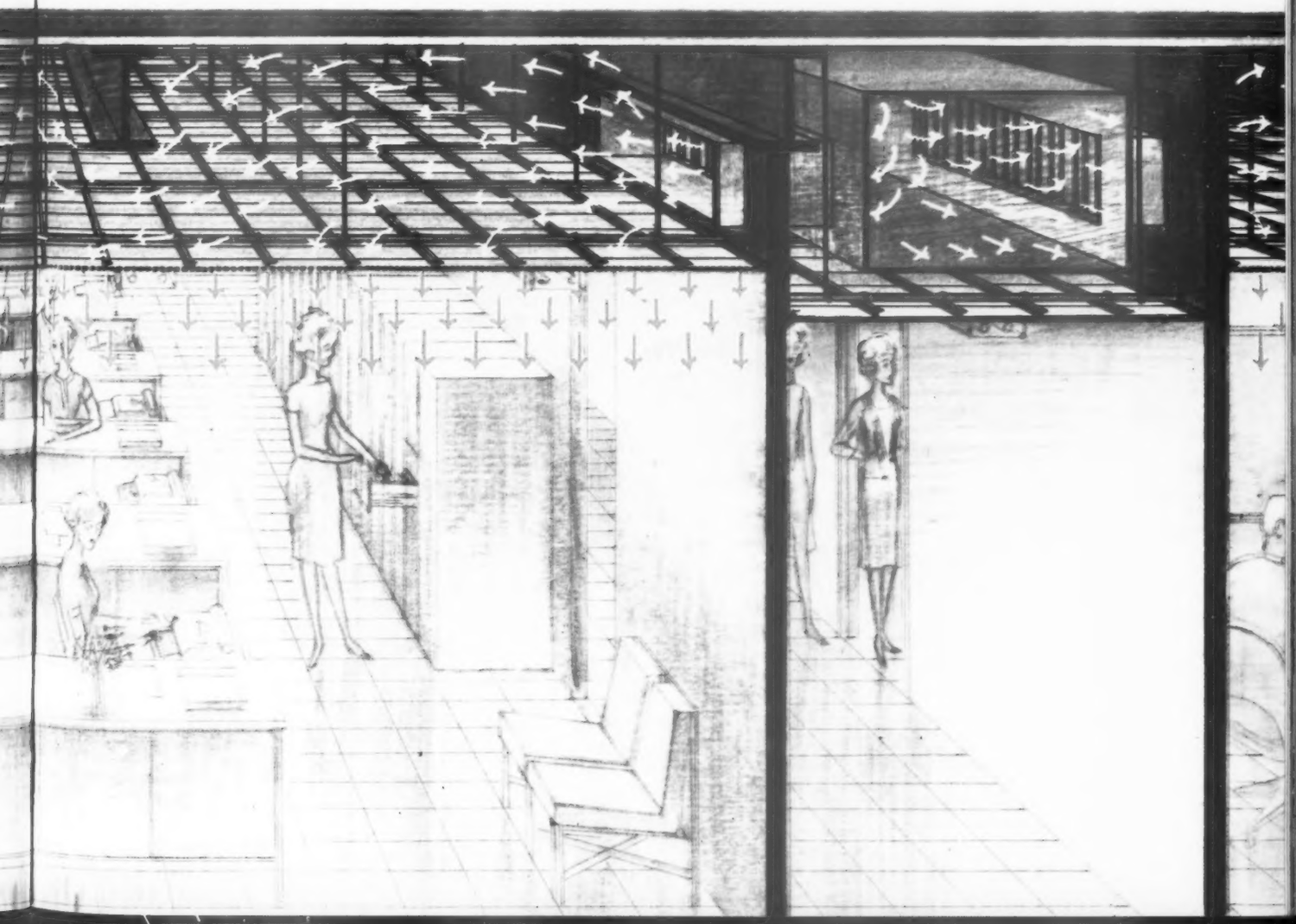


3. They're acoustical—hushing room noises, muffling air-conditioning sounds

Armstrong Ventilating Ceilings have the same high acoustical properties as other Armstrong Acoustical Materials. Noisy air diffusers are, of course, eliminated. And the suspended ceiling separates occupants from any noise that might be transmitted through air-conditioning supply ducts.

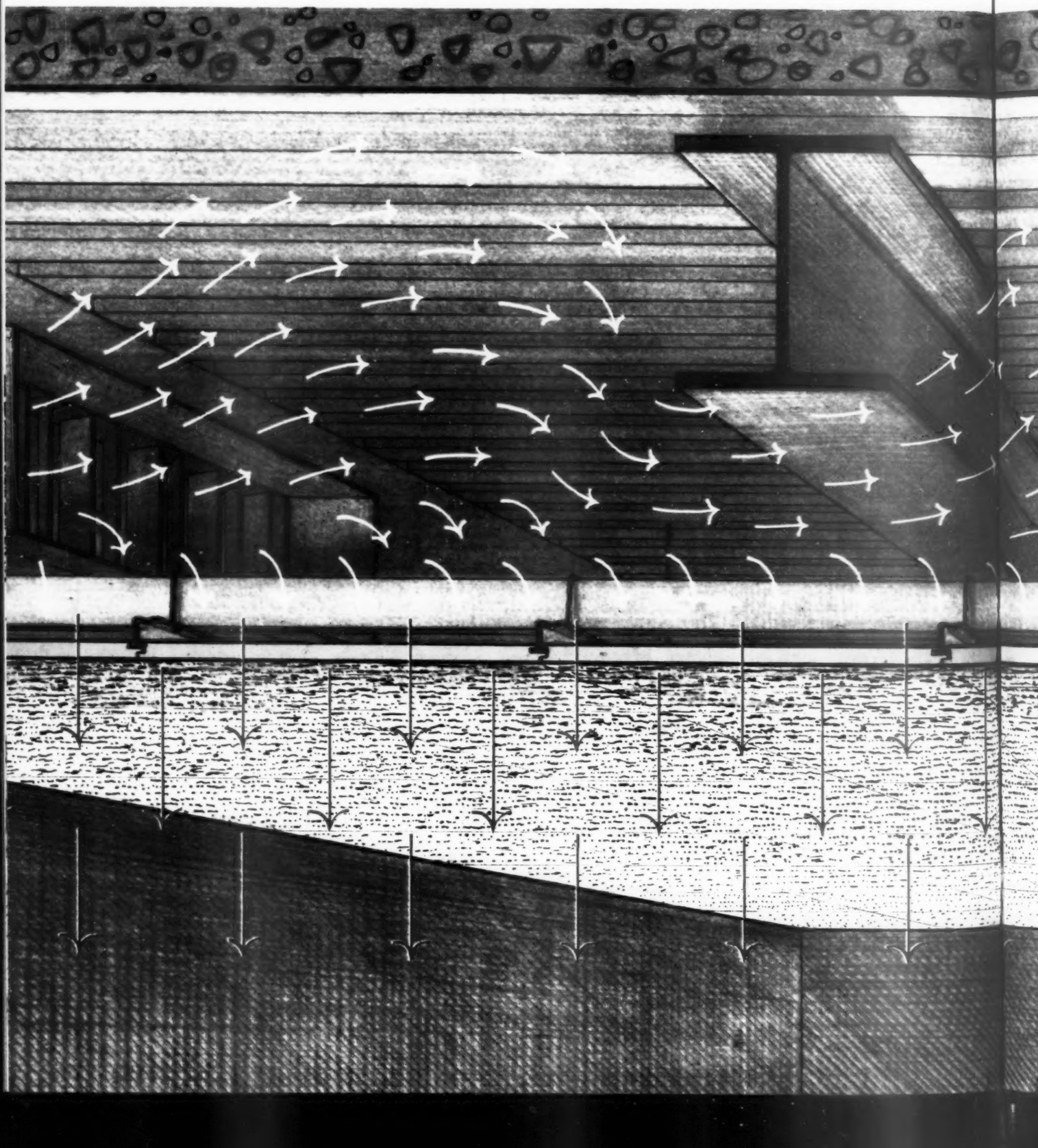
4. The ventilating ceiling can incorporate time-design-rated fire protection

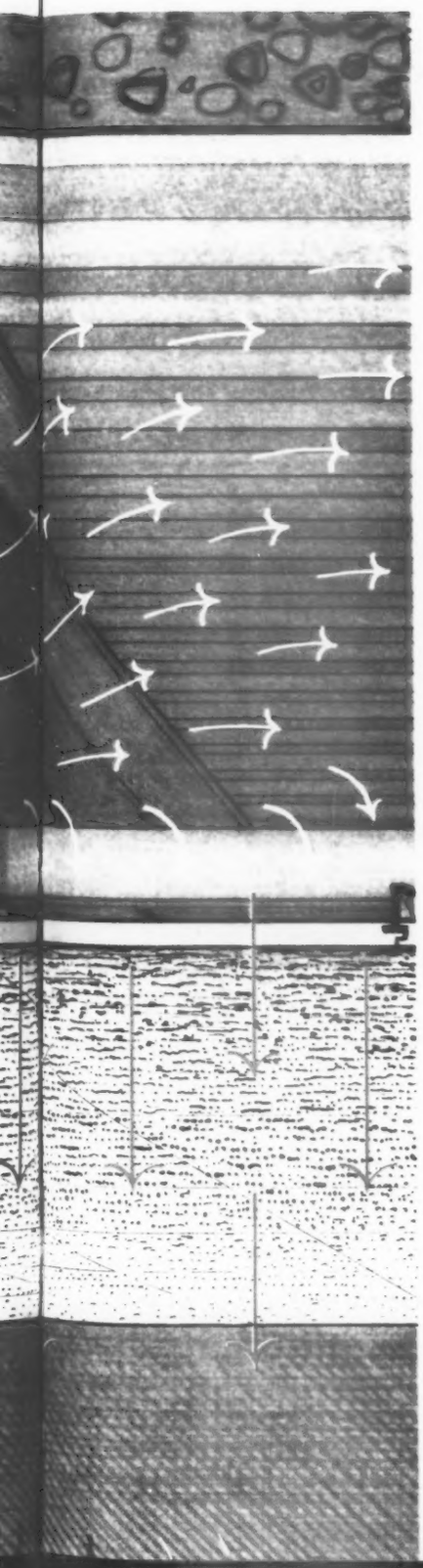
Armstrong Acoustical Fire Guard is available for use in Ventilating Ceilings. Floor-ceiling assemblies, using Ventilating Fire Guard throughout the ceiling, have been tested at Underwriters' Laboratories. The tiny ventilating perforations in the ceilings accounted for over-all open areas of two per cent. Beam-protection ratings up to four hours have been obtained for Ventilating Fire Guard Tile (UL Report 4177-6), and up to three hours for Ventilating Fire Guard Lay-In (UL Report R-4177-7).



ARMSTRONG VENTILATING CEILINGS

their technology





1. The plenum chamber acts as the duct... the ceiling acts as a diffuser

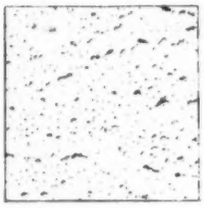
This system is remarkably simple in principle. As the sketch demonstrates, conditioned air enters the plenum chamber through the supply-duct stub by a low-pressure air-inlet system. It is dispersed throughout the chamber and is forced down through the ceiling into the room. Any conventional return-air system may be used with Armstrong Ventilating Ceilings. The system has proven very effective even in large plenum chambers. For example, in one installation, air was projected across 80′ in a 22″ plenum (despite the obstruction of 14″ I-beams) and achieved uniform distribution in the area below.

2. Special plenum-engineering data available

This data provides all the necessary factors and formulae for the correct design and engineering of plenum chambers where Armstrong Ventilating Ceilings are used as the air-inlet system. This step-by-step procedure has been specially developed for the use of ventilating engineers, and is available through your Armstrong Acoustical Contractor or Armstrong District Office.

DATA ON ARMSTRONG VENTILATING CEILING MATERIALS

For complete information on Armstrong Ventilating Ceilings, call your Armstrong Acoustical Contractor or one of the Armstrong Offices listed below. Or write to Armstrong, 4200 Miller St., Lancaster, Pa.



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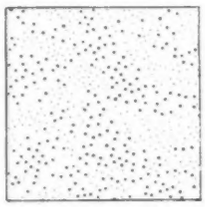
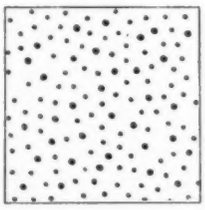


CLASSIC



FULL RANDOM

Travertone.

12"x12" fissured, mineral-wool tile, with square or beveled edges.

Minatone.

12"x12" mineral fiber tile in the Classic and Full Random designs, with beveled edges.

Minaboard Lay-In.

Nominal 24"x24" and 24"x48" units in the Full Random and Classic designs for exposed grids.

Fire Guard.

12"x12" fire-retardant tile in the fissured, Classic and Full Random designs with beveled edges.

Fire Guard Lay-In.

Nominal 24"x24" and 24"x48" units in the Classic design for Fire Guard grid.

Travertone, Minatone® and Minaboard® are trademarks of Armstrong Cork Company.

Some recent installations of Armstrong Ventilating Ceilings:

Battle Creek Country Club, Battle Creek, Mich.
architect: Haughey, Black and Williams, Battle Creek
mechanical engineer: Meckler Engineering Co., Toledo, Ohio
general contractor: Phelps-Wagner Builders, Battle Creek
acoustical contractor: B. C. Schuemann Co., Battle Creek

Dinwoodey Furniture Company, Salt Lake City
architect: Snedaker-Budd-Monroe & Associates, Salt Lake City
mechanical engineer and contractor: Richard C. Brown, Mayne Plumbing and Heating, Salt Lake City
general contractor: Cannon Construction Co., Inc., Salt Lake City
acoustical contractor: Utah Pioneer Corp., Salt Lake City

Northern Federal Savings and Loan Association, St. Paul, Minn.
architect and ventilating engineer: Associated Architects and Engineers, Inc., St. Paul
mechanical contractor: Pierre Aircon Co., St. Paul
general contractor: William Baumeister Construction Corp., St. Paul
acoustical contractor: St. Paul Linoleum and Carpet Co., St. Paul

Arizona Bank, Home Office Motor Bank, Phoenix
architect: Lester Byron, Phoenix
general contractor: Ray P. Petersen Contractor, Inc., Phoenix
acoustical contractor: Barrett-Homes Contractors, Phoenix

Armstrong General Office Building, Lancaster, Pa.
consulting engineer: Charles S. Leopold, Inc., Philadelphia
mechanical contractor: B&G Olsen Co., Inc., Richmond, Va.
acoustical contractor: Berger Acoustical Co., Inc., Haverford, Pa.

Lit Brothers Restaurant, Philadelphia
architect: O. L. Fallan, AIA, Philadelphia
chief designer: John Jones, Philadelphia
acoustical contractor: Berger Acoustical Co., Inc., Haverford, Pa.

John Deere Office Building, Moline, Ill.
architect: R. B. DeJeager, company architect, Moline, Ill.
ventilating engineer: Ward Jensen, company engineer, Moline
general contractor: Axel Carlson Company, Moline
acoustical contractor: Builders Sales & Service Co., Moline

4747 Building, Phoenix
architect: Ralph Haver & Asso., Phoenix
mechanical engineer: Lowry & Sorensen, Phoenix
general contractor: Gilbert & Dolan, Phoenix
acoustical contractor: Barrett-Homes Contractors, Phoenix

St. Paul's Church Home, Inc., St. Paul, Minn.
architect: Buetow and Associates, St. Paul
mechanical contractor: Healy Plumbing & Heating Co., St. Paul
general contractor: J. S. Sweitzer & Son, St. Paul
acoustical contractor: St. Paul Linoleum and Carpet Co., St. Paul

Armstrong offices

ATLANTA, GA.
727 West Peachtree St., N.E.
TRinity 5-7201

BOSTON, MASS.
200 First Avenue, New England Industrial Center, Needham Heights 94. Hillcrest 4-5700

CHARLOTTE, N. C.
1127 East Morehead Street.
EDison 3-7741

CHICAGO, ILL.
6535 West Irving Park Road.
PEnsacola 6-9440

CINCINNATI, OHIO
1057 Meta Drive. ELmhurst 1-3330

CLEVELAND, OHIO
2975 Superior Avenue. MAin 1-7900

DALLAS, TEXAS
2727 Oak Lawn Avenue.
LAkeside 6-7468

DENVER, COLO.
35 West 5th Avenue. CHerry 4-0543

DETROIT, MICH.
Free Press Building, 321 Lafayette Ave., West. WOodward 3-8322

KANSAS CITY, MO.
500 West 26th Street. Victor 2-9154

LOS ANGELES, CALIF.
5983 E. Smithway Street.
RAymond 3-9381

MINNEAPOLIS, MINN.
4539 Hiawatha Ave. PArkway 1-2447

NEW YORK, N. Y.
60 West 49th Street, Rockefeller Center. JUdson 2-3700

PHILADELPHIA, PA.
301 City Line Avenue, Bala-Cynwyd. TEnnyson 9-6640

PITTSBURGH, PA.
24th St. & Allegheny River.
ATlantic 1-7474

ST. LOUIS, MO.
1919 Hampton Ave. MIssion 7-3200

SAN FRANCISCO, CALIF.
1814 Ogden Drive, Burlingame.
OXford 2-1833

SEATTLE, WASH.
221 Minor Ave., North. MAin 3-2772

CANADA
6911 Decarie Boulevard,
Montreal 29, Quebec

Armstrong ACOUSTICAL CEILINGS

result of the way school administrators are trained; these administrators are more interested in process, than in the end to be served.

Dean Keppel suggests three simple steps for the profession to take in assuming more national responsibility. Once accomplished, he says, the profession will earn more influence with the public, in Congress, and possibly even in the press.

PUBLIC POLICY AND SCHOOL ADMINISTRATION. *Francis Keppel. New England School Development Council, 20 Oxford St., Cambridge, Mass. 28 pages. 75 cents (25 cents for NESDEC members).*

LANGUAGE LABS

Tape-recorded guide. A 45-minute tape on using the language lab is available at cost from Minnesota Mining & Mfg. Co. The tape emphasizes the importance of well programed lessons, presents samples of structured pattern drills, and gives suggestions from experienced language lab teachers. For purposes of illustration, the drills are prepared in English, rather than a foreign language. A 20-page lesson guide accompanies each tape.

BEHIND THE TAPE—THE TEACHER. *Dept. El-333, Minnesota Mining & Mfg. Co., St. Paul. Monaural. $2.25.*

TEACHING MATERIALS

Free curriculum aids. Here's another useful "guide," published by Educators Progress Service, listing free materials available to supplement elementary school curriculums. Over 1,280 different items—maps, bulletins, pamphlets, exhibits, charts and books—are listed. The materials are gathered from various industrial, government and philanthropic sources. Subjects are cross-indexed by classification, title and source. The wealth of materials offered is timely and up-to-date. A copy of this guide belongs in every elementary school.

ELEMENTARY TEACHERS GUIDE TO FREE CURRICULUM MATERIALS. *18th edition. Educators Progress Service, Randolph, Wisc. 312 pages. $7.50.*

PHYSICAL EDUCATION

Suggested programs. This booklet, written by the President's Council on Youth Fitness, tells how to set up a daily physical fitness program in your school.

Part I, *Concepts and Foundations,* tells how to identify and appraise the physically underdeveloped pupil. It also gives suggestions on how to set up daily correctional programs.

Part II, *Practical Suggestions on Tests, Activities and References,* tells how to lead a fitness program. It sets forth various exercises and activities designed to improve performance, emphasize physical development, and promote good posture. There are 84 pages of illustrated directions.

This booklet also contains screening tests, remedial programs, tables of standard performance, curriculum suggestions and references for further information.

YOUTH PHYSICAL FITNESS. *Parts I and II. Available from Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. 111 pages. 40 cents.*

GUIDANCE

The school psychologist. Here's a book which discusses methods of solving the everyday, nontechnical problems that a school psychologist

HOW TO MAKE A SCHOOL RUN LIKE CLOCKWORK

Here's how the University of Cincinnati did it—installed a modern *Cincinnati* time and program system. Now, clocks are accurate to the minute . . . bells ring right on time. Best of all, *Cincinnati* time equipment is flexible—permits modernization of your existing time system in stages, as the opportunity or need arises . . . also provides for future facilities.

Discover how smoothly your school can run on *Cincinnati* time—mail coupon for FREE booklet.

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Gentlemen: Please send Guide Book on School Program Systems

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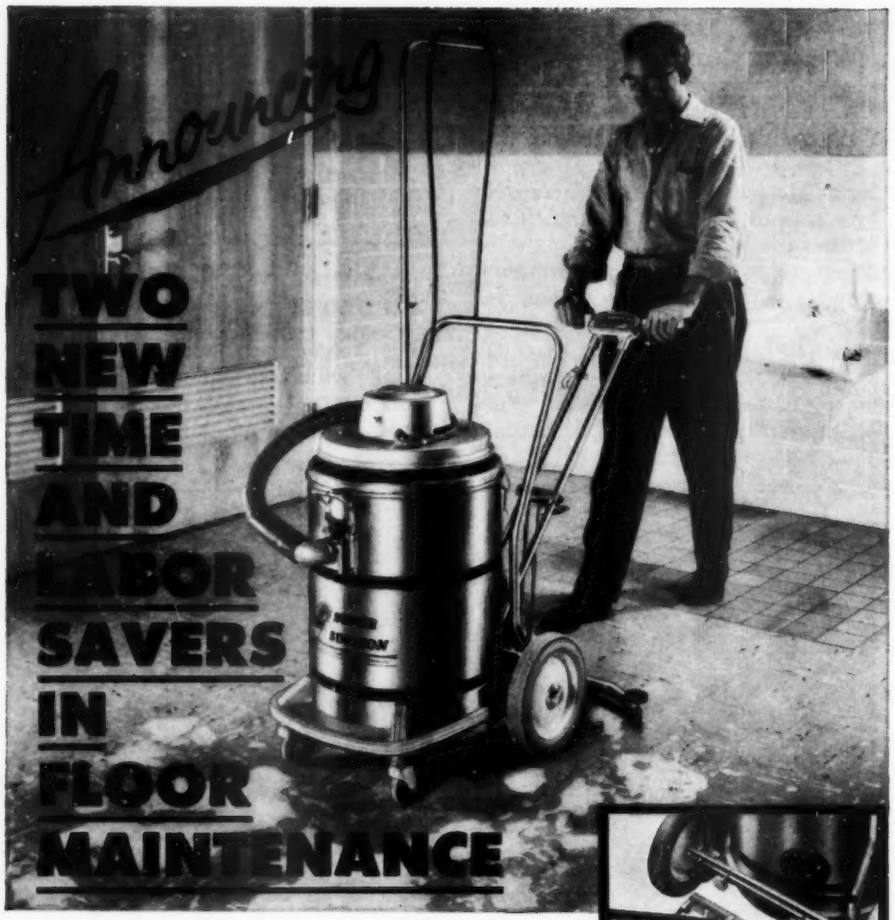


SAVE all that labor and time you would spend attaching and removing a squeegee attachment to a heavy duty suction cleaner.

SAVE all the effort and time you would spend keeping the suction cleaner cord out of the work area. Super now provides 2 long-desired, new, exclusive features.

❶ For massive scrub water pick-up you can attach or detach the big Super Squee-Zee 30 floor drying attachment to a Super Model BP-2 or RS-1 heavy duty suction cleaner in ten seconds without any tools—just hands.

❷ The new, exclusive Super Cord Control Mast keeps the cord out of the way at all times, permitting the operator to maneuver the cleaner freely without stopping to pull the cord away from the path of the machine.

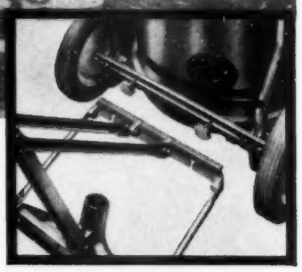
Guide wheels mounted on the ends of Super Squee-Zee 30 blade unit permit free use of the Squee-Zee 30 close to walls and other surfaces without damage or slow-down in operation.

The new Super Squee-Zee 30 provides an extra large suction chamber that will handle wet pick-up as fast as the operator can walk, leaving a 30" swath of perfectly dry floor—no streaks, no wet spots, no wheel marks.

Makes your regular Super suction cleaner a big volume floor drying machine at small cost. Dries up to 26,000 sq. ft. per hour.

You won't find these new features on any other heavy duty suction cleaner.

WRITE FOR CATALOG AND DATA, OR LET YOUR LOCAL SUPER DISTRIBUTOR SHOW YOU!



The Super Squee-Zee 30 is attached to a bar permanently mounted on the transport handle of the cleaner. A matching plate on the Super Squee-Zee 30 is simply dropped into place and threaded bolts tightened by hand.

The Super Cord Control Mast attached to the cleaner extends up and away from the cleaner. The control arm can be swung in any direction, keeping the cord away from the work.

SUPER® SUCTION POWER SUCTION CLEANERS / SUPER® SERVICE FLOOR MAINTENANCE MACHINES

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can expect to face in his job. Although it concentrates on the people, issues and responsibilities which the psychologist encounters, there is detailed attention to research and clinical studies.

The book analyzes the socio-economic factors which affect a student's academic, emotional and social functioning in the classroom, and discusses how to evaluate a pupil's problem. There is also information on how the entire school staff can make use of psychological services.

THE SCHOOL PSYCHOLOGIST. *By Mary Alice White and Myron W. Harris. Harper & Brothers, 49 E. 33rd St., New York City 16. 431 pages. $6.*

Guidance services explained. Two booklets, one for students and one for parents, explain the role of guidance in the high school. Briefly, the booklets tell what a guidance counselor does—and does not do. Well written in sensible English, they do a good public relations job for guidance services.

Prepared for use in Florida's schools, the publications are available to other school administrators.

AND DOORS WILL OPEN; DOORWAYS TO THE FUTURE. *State Department of Education, Tallahassee, Fla. Each booklet is 13 pages. 15 cents each.*

POLICY

Controversy in the classroom. The NEA has published a short booklet which suggests how to handle vital but controversial issues in your classrooms. The main contention is that controversy should not be avoided, but rather, policies should be formulated to deal with it objectively. It is the school board's responsibility to write a statement of policy to protect teachers from outside pressure, and to maintain the school's freedom to consider controversial subjects.

The booklet also says, "Such a policy statement, guaranteeing freedom to learn, may be arrived at cooperatively by the formation of an advisory committee consisting of classroom teachers, school administrators, board members and other citizens."

Seven criteria are set down which may be used to judge the classroom importance of controversial issues. Also, the booklet briefly reports on several school districts in which written policy statements are successfully in operation.

CONTROVERSIAL ISSUES IN THE CLASSROOM. *Published by the National Education Association, Washington 6, D.C. 30 pages. 50 cents.*

Bell & Howell engineering creates the most revolutionary 16mm sound projector in 25 years... different from top to bottom...inside and out!

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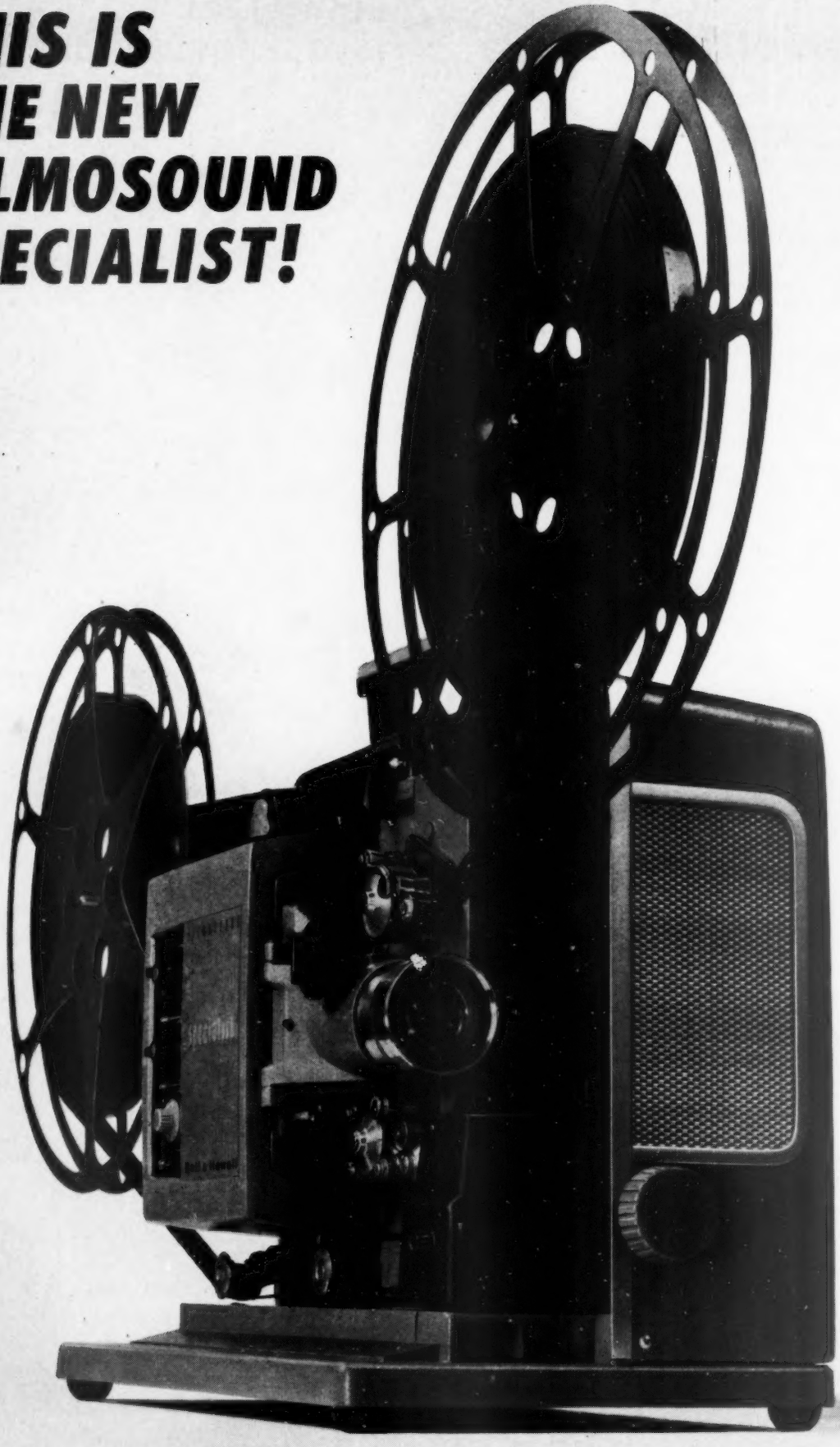
THIS IS THE NEW FILMOSOUND SPECIALIST!

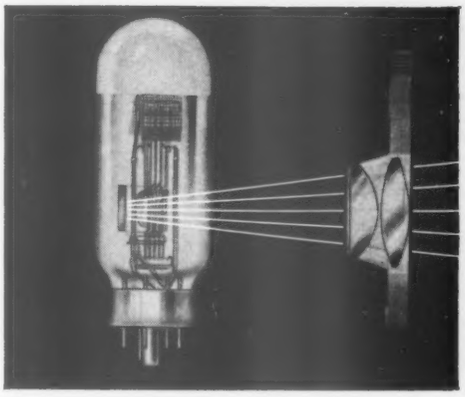


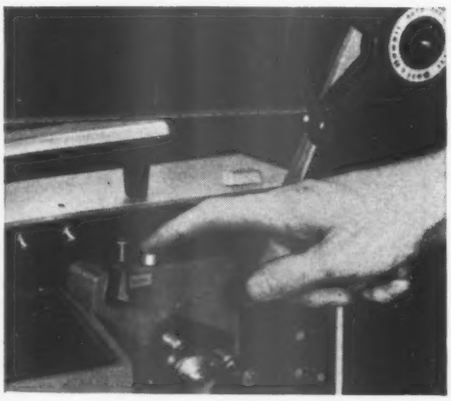
20% LIGHTER than any other major audio visual projector.

It weighs only 29 lbs.! It is the first projector with a magnesium die-cast unitized frame – lighter . . . stronger . . . extra tough! The new FILMOSOUND SPECIALIST is not just light enough to lift . . . it's light enough to carry . . . and rugged enough to take the bumps and bangs. This will mean considerably more use in classrooms. Teachers will be more enthusiastic about using films when they don't have to handle a cumbersome piece of equipment.

34% BRIGHTER than the average 16mm projector!

The newly designed Proximity Reflector lamp and a new f/1.4 Super Proval Lens give sharper images and more brilliant colors . . . a picture with punch. No need for special shades or blinds in most classrooms. The new FILMOSOUND SPECIALIST is so bright it is even replacing arc-light projectors in many school auditoriums, besides serving double duty in classrooms. And you can interchange 750, 1000 and 1200 watt bulbs and still get more light with each.





FAR, FAR EASIER TO USE with the most simplified controls ever put on a 16mm sound projector.

It sets up from closed case to projected picture in a little over a minute. Rewinding is fast and simple, you don't change reels. Internal gears operate the reel arms; no belts to switch . . . or to tear loose. An automatic lower loop restorer keeps the film moving smoothly and quietly without interruptions – even with damaged film. Teachers and students can show films confidently without being professional projectionists.

The rapidly growing importance – and cost – of modern school audio visual programs make it imperative that each appropriated dollar be spent as wisely as possible. In addition to considering the tangible advantages of the FILMOSOUND SPECIALIST, consider one intangible: it is made by Bell & Howell . . . maker of over half of all the 16mm sound projectors now in operation. Bell & Howell quality means dependable durability. Bell & Howell experience means a projector tailored to your exact needs. In short, the FILMOSOUND SPECIALIST will go more places and do a better job under more conditions than any other school projector in the world!

CLIP THIS COUPON AND MAIL TODAY!

BELL & HOWELL COMPANY, Dept. SM-11
7100 McCormick Road, Chicago 45, Illinois

I am interested in the FILMOSOUND SPECIALIST for our school audio-visual program. Please send me more information.

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Bell & Howell *FINER PRODUCTS THROUGH IMAGINATION*

Watch for "Bell & Howell Close-Up!" Informative . . . Provocative. ABC-TV Network, Oct. 31, Nov. 14, 23, 28, Dec. 5, 10 and 13.

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the compact office electric by Smith-Corona

Here is the most teachable typewriter ever made . . . the new Compact 200 by Smith-Corona. It is compact in appearance and in fact . . . and sensibly priced at about what you'd expect to pay for a manual.

The Compact is a full-featured electric office typewriter, yet it takes up no more space than a manual. Here in one compact package you get a teaching tool with a full-sized electric keyboard . . . full-sized carriage with automatic return . . . automatic repeats. There are no dual-purpose keys or hidden controls to confuse the student. No gadgets or unnecessary extras. And no discipline hazards. The Compact 200 is "all business."

Of course, it's important today to teach **electric** typing, because modern business calls for typists familiar with electric machines. And in school or out, there is no electric typewriter more economical, more efficient than the new Smith-Corona Compact 200.

To see it at work in **your** classroom, call your Smith-Corona representative. And ask about the complete portfolio of teaching aids available.

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ewest, *Brightest* Picture...
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LL EXCLUSIVELY with the all-new Galaxy® by GRAFLEX

hread a sound head again! Slide film into the convenient diagonal slot. Flip a single lever. positioned, sound loop formed and sound head threaded—all instantly, *automatically!*

NEW, THE MANY Galaxy features include an ex- ve high-intensity lamp. Internal dichroic reflector inates light-absorbing, dust-catching condensers and rnal reflectors, and reduces heat on the film a full 50%!

Galaxy gives you the advantage of a unique new high- sity lamp. Through push button controls two-levels llumination are provided—"Normal" and "Hi." At rnal," equivalent to 800 watts, lamp life is extended mes—to a minimum of 150 hours. For long auditorium vs, to bring life to dense prints, or for projection with nimum of room darkening, the "Hi" setting delivers quivalent of 1200 watts, a brilliance surpassed only by carbon arcs. For the finest sound in 16mm, Galaxy introduces an exclusive hiss-free phototransistor pickup. Plus a full 15-watt transformer-powered high-fidelity amplifier. and removable speakers. For the first time you are provided with separate controls for bass and treble, for new richness in music, new clarity in speech, new quality in sound.

Fast and easy to set up and rewind, with exclusive push-button control, Galaxy is simpler, smoother, and quicker in operation than any other. Arrange with your Graflex AV dealer for a demonstration of its new exclusive advances in projector performance —or write to Graflex.

GRAFLEX®

ster 3, New York. In Canada: Graflex of Canada Limited, 47 Simcoe St., Toronto 1, Ontario A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

(Circle number 722 for more information)

YOURS FOR THE ASKING

This material—promotional and otherwise—contains ideas of possible value to you and your schools. Each item listed will be sent to you without cost.

FOR FREE COPIES, USE READER SERVICE CARD

Streamline cafeteria. A 12-page booklet from the Olson Mfg. Co., Inc., illustrates new mechanized food and dish-handling systems. Plans, drawings and actual photographs are shown of various systems.

For a free booklet, circle number 854 on the Reader Service Card.

Football field floodlights. A manual containing specifications and installation data on football floodlighting is offered by the Benjamin Div. of Thomas Industries, Inc. The 32-page catalog gives such data as the minimum mounting height, recommended distance for pole installation, and suggestions for the type and number of lights for specific seating capacities. Data on accessory floodlighting equipment is also covered.

For a copy of this floodlighting catalog, circle number 876 on the Reader Service Card.

Answers TV questions. A four-page bulletin explains a new educational TV system that allows students to ask their television instructor questions—and receive answers via the classroom TV. The step-by-step procedure is diagramed, and technical specifications are given for systems of six to 24 classroom stations.

To get a bulletin, circle number 893 on the Reader Service Card.

Equipping for ceramics. Recently published by Craftools, Inc., this 24-page catalog on ceramic equipment details a wide selection of potter's wheels, spray booths, ball mills, jars, damp and dry cabinets, and tools. All items are described and illustrated.

For a free catalog, circle number 866 on the Reader Service Card.

Water fountains. A four-page brochure on Sunroc stainless steel drinking fountains gives descriptions, specifications and hooking-up instructions.

For a free copy of this brochure, circle number 868 on the Reader Service Card.

Radio controls buses, trucks. All of your district's school buses, trucks and other vehicles can be controlled through a radio network described in this bulletin published by General Electric. Vehicles can be put on a single system or on separate networks. The bulletin tells how two-way conversations with mobile units can integrate their operations, saving time and money.

For a free copy of the bulletin, circle number 870 on the Reader Service Card.

Telephone for students? Open-construction, acoustical telephone booths are described in a folder being distributed by the Burgess-Manning Co. The booths are available in a variety of models, most of which are suitable for installation in corridors or other noisy areas.

For a free copy of the folder, circle number 873 on the Reader Service Card.

Shop tools. A 48-page catalog of machine tools and accessories is available from the Walker-Turner Div. of Rockwell Mfg. Co. Some of the tools described are drill presses, grinders, cut-off machines, band saws and belt and disc surfacers. Tool specifications, catalog listings, descriptions and photos are included in the two-color catalog.

For a free copy of this catalog, circle number 882 on the Reader Service Card.

Language lab. A new eight-page brochure contains information on the functions, installation and specifications of Radio Corporation of America language laboratory equipment.

For a copy of this brochure, circle number 887 on the Reader Service Card.

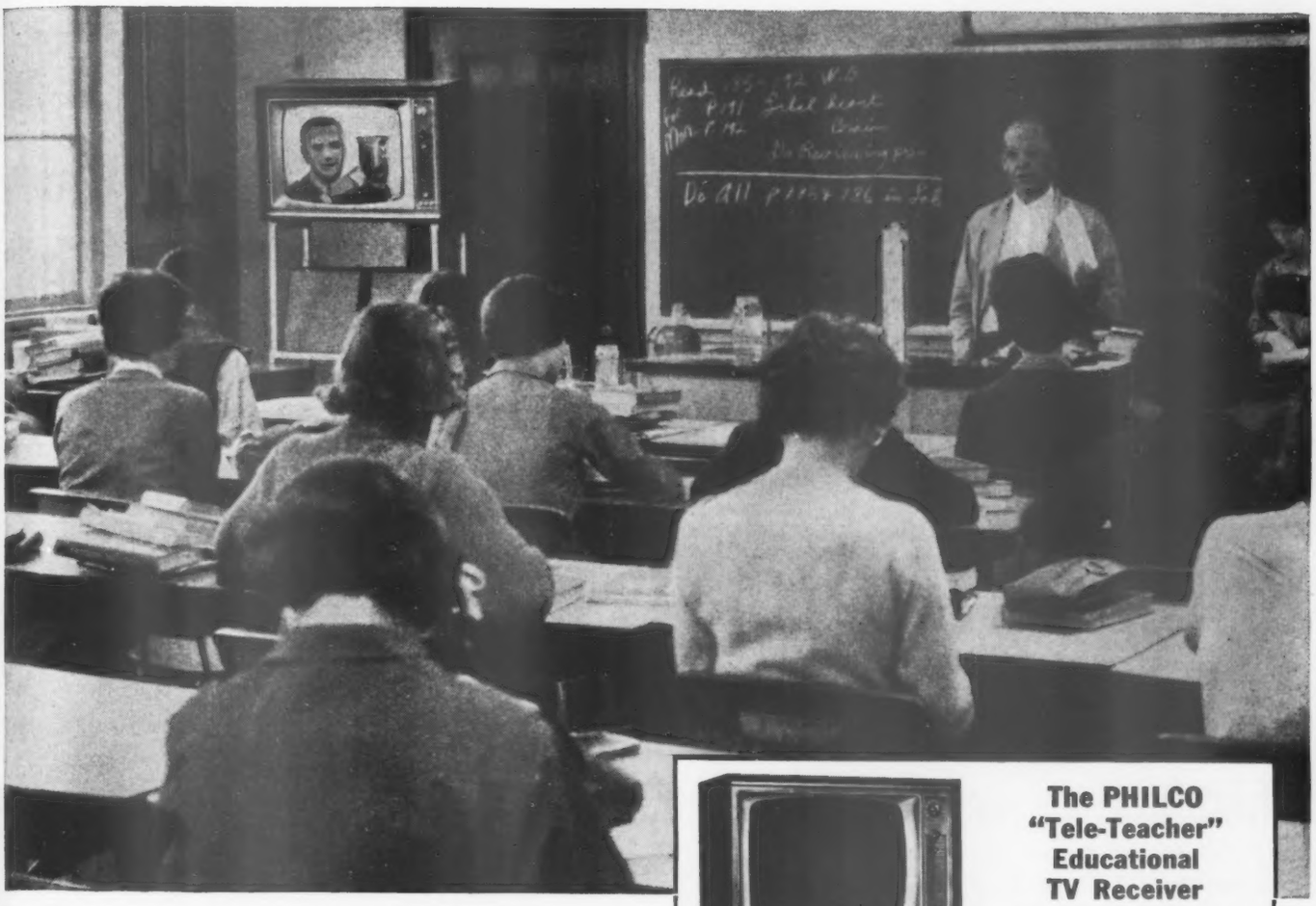
Emergency lighting. When a power failure results in a blackout, emergency lighting described in this booklet can keep things normal. The Electric Cord Co., manufacturer of emergency lighting and distributor of this booklet, says that battery-powered lighting can be tailored to floor plans and blueprints at small cost. It can be wired to regular current, and will go on automatically when electric power fails.

For a free copy of this booklet, circle number 899 on the Reader Service Card.

Cut office costs. A new booklet entitled "34 ways to cut hidden office costs" is offered by A. B. Dick Co. It tells how modern photocopy methods can save time and money, eliminate errors and improve communications. The booklet outlines 34 photo-

continued on page 127

NEW! PHILCO "Tele-Teacher" Educational Television Receiving System



Finest way to bring audio-visual educational aids to your school!

Designed and engineered to meet the rigid specifications of the Midwest Program on Airborne Television Instruction, Philco "Tele-Teacher" educational TV is more than just a receiver on a Mobile stand. It is a *completely integrated receiving system*, including antennas, converters, distribution equipment, plus the exclusive Philco "Tele-Teacher" classroom receivers. The fact that every component is exactly matched assures finest clarity of sight and sound . . . the utmost in flexibility and versatility.

The Philco "Tele-Teacher" system is designed to bring you the finest Educational and Program TV Reception whether it be ground, closed circuit *or* airborne transmission. Send coupon for complete information and specifications.

In addition to the Philco Tele-Teacher, Philco makes Compact 19's, Briefcase 19 Portables and fine furniture consoles for educational TV use.

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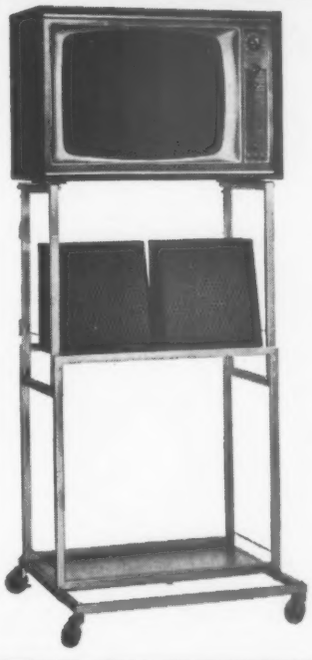
Famous for Quality the World Over



The PHILCO "Tele-Teacher" Educational TV Receiver

- All-front tuning. Controls are easy to reach at any height. Push-pull on-off switch for permanent volume adjustment. Out-front speaker for best sound projection.
- 23" screen for easy viewing in any size room. 282 sq. in. viewable area. No-glare, anti-reflection frosted C.R. tube.
- 2 plug-in 8" extension speakers with 50 ft. cords for use anywhere in room.
- Rugged adjustable stand with tilt feature, 2 accessory shelves, wide base frame for stability. Rubber casters with 2 lock type wheels.
- Underwriters' Laboratories Approved.

AUDIO CONTROL PANEL in back of set

Includes Audio Limiter, external speaker jacks, plus provision for phono and tape-recording of TV programs or play back through TV sound system.

To: PHILCO CORPORATION, Educational TV Dept., Ext. 5061
Philadelphia 34, Pa.

Please send me full information concerning Philco Educational TV Receivers. Please check Tele-Teacher ☐ Compacts ☐ Portables ☐ Consoles ☐.

Name_____

Position/School_____

Address_____

City_____ Zone_____ State_____

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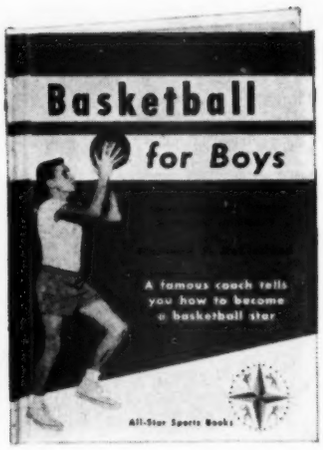

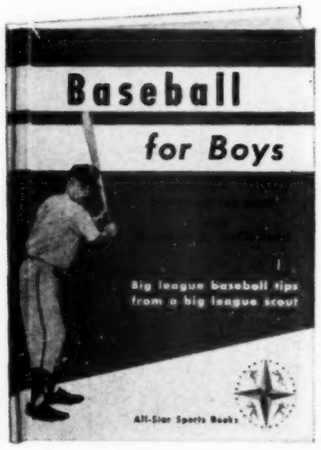

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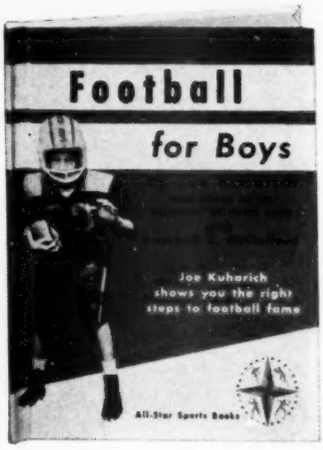

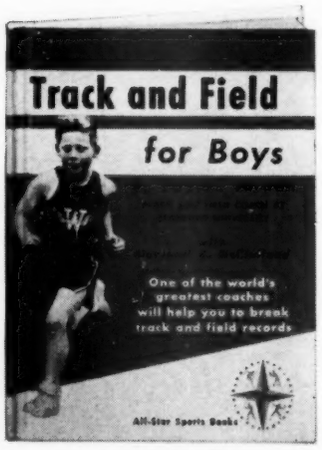
Track and Field
for Boys
One of the world's greatest coaches will help you to break track and field records
All-Star Sports Books

All-Star Sports Books are produced by Follett Publishing Co., Chicago. Bindings by Rand McNally, Conkey Div., Hammond, Ind.; Photopress, Inc., Broadview, Ill., printers. Top print by Paper Converting & Finishing Co., Chicago.

They're attractive . . . invite reading . . . studying. But even more important: vinyl "PX"* cloth is durable . . . lasts longer and is fully ten times more scrub-resistant** than pyroxylin materials of the same grade. Resists breakdown at hinges . . . withstands hard knocks and wears better at corners. It's a binding that helps you cut down on textbook replacement costs.

Vinyl "PX" cloth complies with Commercial Standard CS-57-40 and Official Minimum Standards and Specifications for Textbooks . . . another reason why more schools than ever before are selecting books bound with this good-looking, tough material. Ask for vinyl "PX" cloth covers the next time you order books from your publishing house. E. I. du Pont de Nemours & Co. (Inc.), Fabrics Trade Products, SM-1-11, Wilmington 98, Del.

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***Scrub-resistance* is one of the important durability tests in comparative evaluation of book cloth.*

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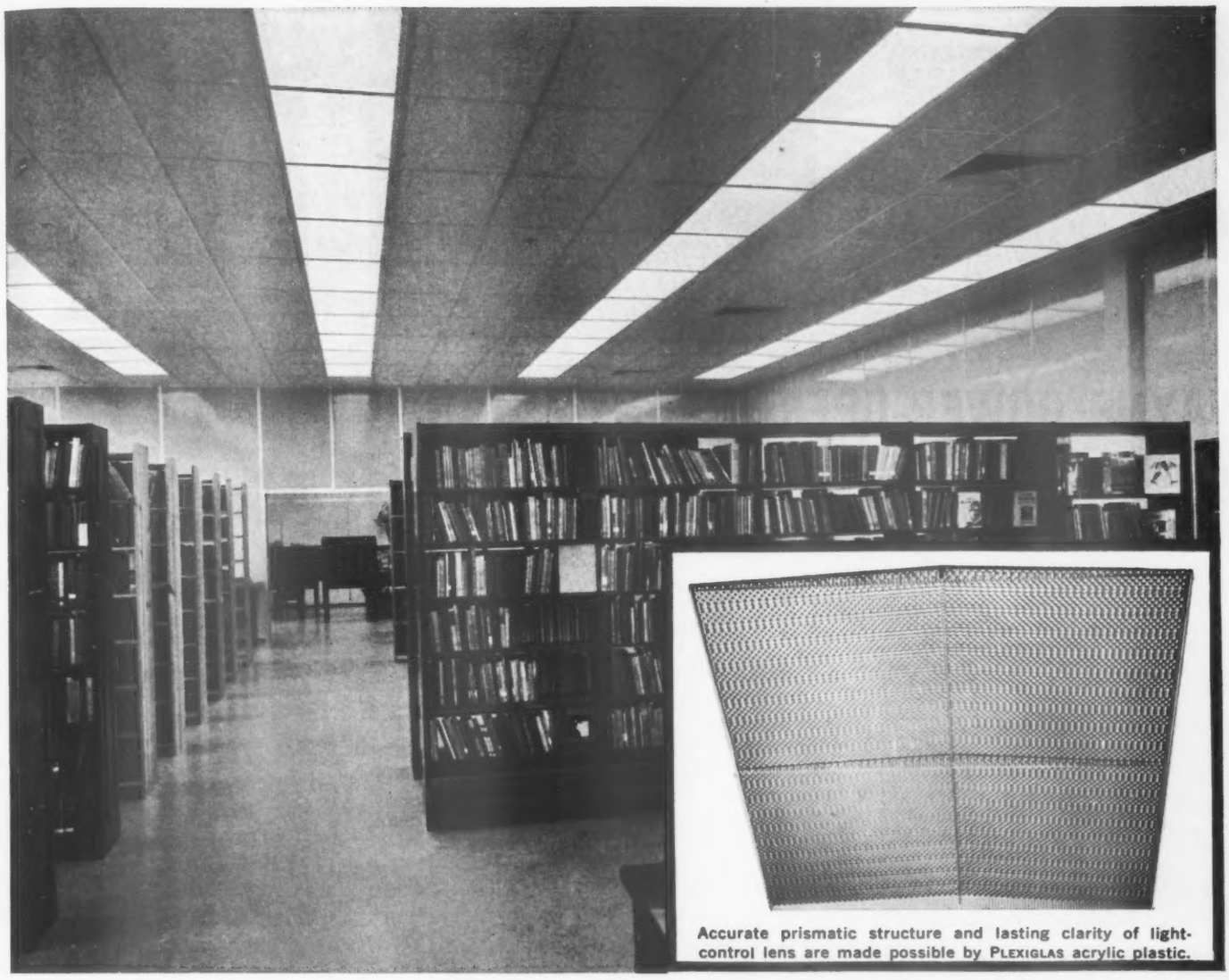

Accurate prismatic structure and lasting clarity of light-control lens are made possible by PLEXIGLAS acrylic plastic.

Control lenses molded of PLEXIGLAS mounted in continuous rows in library of County of Sonoma school administration building, Santa Rosa, California. Architects: Steel & Van Dyke, Santa Rosa.

Plexiglas...for lighting that stands out and stands up

When lighting equipment includes control lenses molded of PLEXIGLAS® acrylic plastic, the result is illumination of the highest quality. This is because PLEXIGLAS makes possible a precisely designed optical element that directs light to the area where it is required and, at the same time, minimizes the surface brightness of the lens as seen from normal viewing angles.

In addition, lenses of PLEXIGLAS remain free of discoloration even after years of exposure to fluorescent light. They are strong and rigid yet light in weight, resulting in safety overhead and ease of maintenance. And the crystal clarity of PLEXIGLAS assures full utilization of light.

Full details on the use of PLEXIGLAS as a lighting material are contained in our 40-page technical bulletin "PLEXIGLAS for Lighting". We will be glad to send you a copy.

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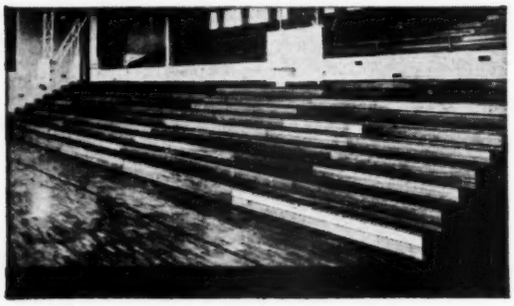
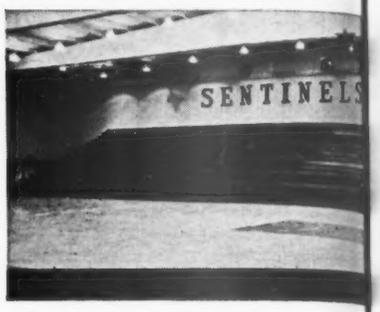
PLEXIGLAS

(Circle number 749 for more information)

Gordon Technical High School—Chicago, Illinois
Architects: Fox and Fox—Chicago, Illinois



Inglewood High School—Inglewood, California
Architects: H. L. Gogerty—Los Angeles, California

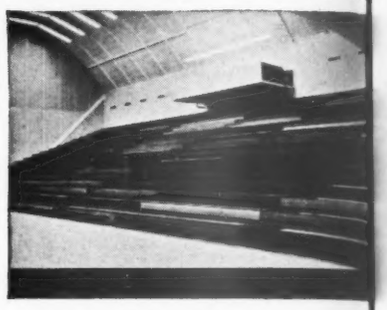


WAYNE POWER-OPERATED GYMSTANDS*

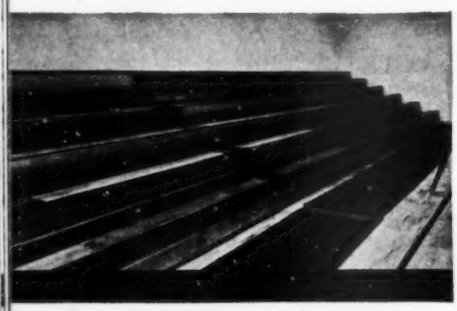
seem to cost more until you look at the advantages!

- **in automatic operation**
- **in longer unit life**
- **in reduced maintenance**
- **in more seating per unit**

Cerritos College—Norwalk, California
Architects: Kistner, Wright & Wright—Los Angeles,

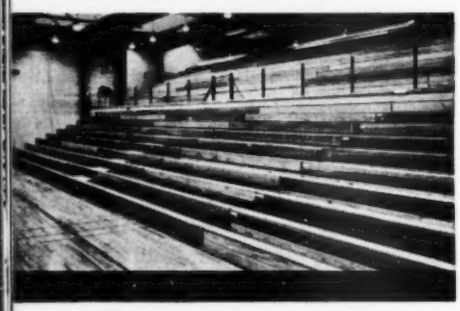


Institut des Technologie—Trois-Rivieres, Canada
Architects: Denoncourt & Denoncourt—Trois-Rivieres, P/Q.



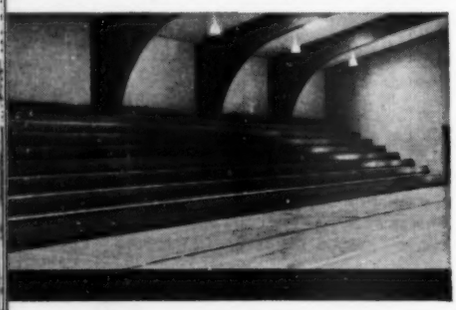
Darien High School—Darien, Connecticut
Architects: Ketchum & Sharp—New York, New York

North Bend Junior-Senior High School—North Bend, Ore.
Architects: Hamlin & Martin—Eugene, Oregon

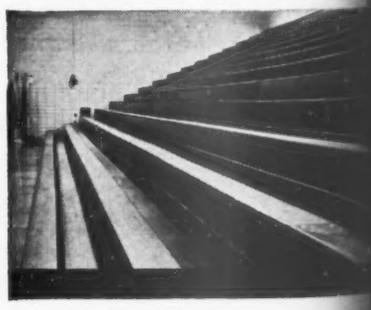


Lake Forest High School—Lake Forest, Illinois
Architects: Stanley D. Anderson Associates, Inc.—Lake Forest, Illinois

Millard Junior-Senior High School—Millard, Nebraska
Architects: Hollis and Miller—Overland Park, Kansas



Hamilton J. Robichaud High School—Inkster, Mich
Architects: Bennett & Straight, Inc.—Dearborn, Mi



The elbow-grease is gone at these twelve handsome gymnasiums because they recognized the inherent advantages in Wayne Power Operated Gymstands. Here is the only Gymnasium Seating System in the industry offering this combination of features plus a choice of two basic types. (1) *Power Operation* in exclusive *Continuous* seat and footboard design with no breaks between sections. (2) *Power Operation* in "*Unit Connected*" seat and footboard design where gaps between sections are reduced to ¼"!

What advantages do these schools gain? First, *Power Operation* eliminates forever the manual labor of physically pulling and pushing Gymstands open or closed. Just turn a key, stands glide to a perfect position.

Next, the controlled, smooth, steady force of Wayne's Power System stops Gymstand banging, jarring and bumping during opening and closing, materially reduces stress and strain, increases Gymstand life.

With Wayne's *Continuous* seat, foot and riser board design, every inch of seating space is usable—can mean up to 10% more seating capacity. Wayne's *Unit-Connected* design, with extra-narrow ¼" gap between sections, offers the same basic advantages, the same space saving feature.

Are you planning a gym? Then talk to the folks at Wayne. For new 32-page full-color catalog, write direct to—

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Basketball Backstops • Folding Stages

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Pottstown Senior High School—Pottstown, Pennsylvania
Architects: Sanders & Thomas Associates—Pottstown, Pa.

Weber County High School—Ogden, Utah
Architects: Keith W. Wilcox and Associates—Ogden, Utah

Whitehall High School—Lehigh County, Pennsylva
Architects: Wolf & Hahn—Allentown, Pennsylvania

THINGS YOUR PUBLIC OUGHT TO KNOW

INCREASE YOUR TAX BASE:

How to bring new industry to your town

Industry is often more interested in how much you spend on education, than how much it will have to spend on land, construction and taxes when it chooses a site for a new plant.

■ ■ ■ The best way to attract good industry to your town is *not* to lower taxes. It *is* to have good schools.

Good schools attract good industry. So says Frank L. Whitney, vice president of Walter Kidde Constructors, Inc., writing in the September issue of *Business Management*, foremost top-management publication in the nation.

Whitney, who specializes in helping companies find new sites, has developed a point system designed to discover which community would be best for any individual plant.

The single most important item in selecting a location for new research facilities, he says, is the quality of the district's schools.

Labor supply, land cost, utility rates and taxes all take a backseat to the schools. As Whitney put it, "Brainy researchers are extremely concerned about the quality of the local school system. This looms larger (for the company) . . . than tax concessions, special zoning grants or any other kind of inducement."

A research lab is only as good as the men who work in it—and these men will not go to a new location unless they can be guaranteed good schools for their children.

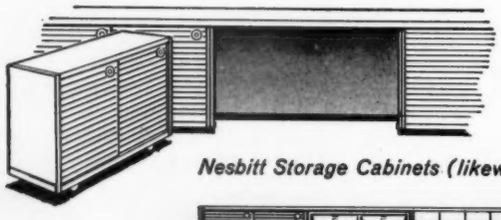
Frank L. Whitney, Vice President, Walter Kidde Constructors, Inc.

Rating a site

Whitney has just developed a 1,000-point scale to rate a potential new research site. Such items as the total cost of land and construction (100 points), taxes (10 points), utility rates (10 points) and availability of houses for sale (100 points) are rated along with

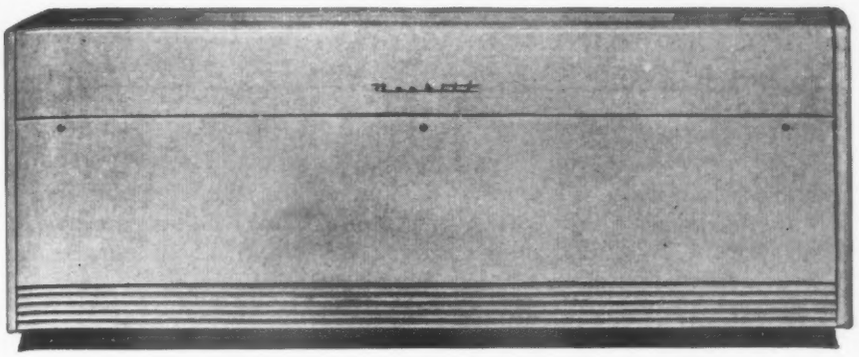
continued on page 40

This is an aid to learning



Nesbitt

Nesbitt Storage Cabinets (likewise aids to learning) are made to integrate with Nesbitt Syncretizers



Changing educational patterns demand flexible schools with learning spaces equipped for year-round air conditioning under unitary control— as an economic necessity based upon educational productivity for the life of the building.

....and so is this

Whatever the shape of schools to come—the size and nature of the "learning spaces," the skills of teachers, and the ingenuity of new tools and methods — maximum learning can result only when the pupils are physically ready for it. This calls for the right control of thermal environment in every occupied space at all times.

On many days of spring and fall, outdoor air is not cool enough to offset the heat gains in the room, and learning suffers. Mechanical cooling is needed now even in nine-month schools intent on achieving scholastic excellence. And with the consensus that schools of the future must be prepared for use during any or all twelve months, it is like planned obsolescence to build a new school today without year-round air conditioning.

Your architect can design an air-conditioned school to meet your educational specifications without sacrifice of esthetic values—and without necessarily increasing your building budget. Nesbitt *Year-Round* Syncretizers—and other Nesbitt air-conditioning units—help to make this possible. A Nesbitt-equipped school is assured of a lifetime of dependable service; Nesbitt's record for the past 44 years will satisfy you of this. May we send more information?

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MORE LEARNING PER SCHOOL DOLLAR

THROUGH NESBITT HEATING, VENTILATING, AND AIR-CONDITIONING EQUIPMENT

(Circle number 768 for more information)

The quality of your schools will do more than anything else to bring new industry to your town—or to keep it away.

the quality of the schools (130 points). But no other single item is considered so important.

A number of factors are considered in rating the schools. Pupil-teacher ratio is given the most weight.

For example, school systems that have at least one teacher for every 25 pupils earn from 35 to 50 points. Thereafter, as the ratio of pupils to teachers increases, the number of points awarded decreases. Any system that has a pupil-teacher ratio that exceeds 35 receives no points at all.

In comparing school systems, the amount of instructional dollars spent per pupil for academic purposes serves as another yardstick. The community that spends its money most efficiently on instruction per pupil rates up to 25 points.

Another 25 points is allowable for the caliber of the school's college preparatory program, the proportion of the total student body enrolled in that program and the record of the school in placing its graduates in outstanding colleges and universities.

The remaining 30 points comprising the 130 total are divided into several other factors. These are the size of the school system, the condition and composition of the physical plant, and the number of private and parochial schools in the area.

In his article, Whitney compares three potential sites for a research facility: Capital City, Medium City and Suburbville. Here is how he applied his school-rating in these three hypothetical situations (*see box below*):

Capital City has 30 pupils per teacher, spends $125 per year on instruction per pupil. Its college preparatory program and its record of placing graduates in colleges and universities is fair. The system is exceedingly large, but the physical plant is in good condition. There are eight public schools to each private school in the area. (35 points.)

Medium City has as many as 35 children per teacher, spends $212 per year in instruction per pupil. It has an excellent college preparatory course and a good record of placing graduates in colleges and universities. Buildings are outdated and the system is large. The public to private school ratio is three to one. (70 points.)

Suburbville, despite the suburban boom, has excellent schools. There is one teacher for every 23 pupils. The system spends $275 per year on instruction per pupil. The high school has a sound college preparatory program and an outstanding placement record. The system is moderate in size and most of the buildings are new. There is one private or parochial school to every three public schools in the area. (110 points.)

The availability of such other educational institutions as colleges and universities is also heavily weighted.

What does all this mean to your district? New industry means increased employment and greater income. So-called "clean industries," such as research labs, are considered a valuable addition even to some of our nation's most exclusive residential areas.

But in selecting a site for this desirable plant, all of the attractions offered by eager city fathers, Chamber of Commerce representatives and honored local heroes pale before the impact of good schools.

A case history

Perhaps this is best illustrated by the case of one Chicago company currently selecting a site in Indiana for a new plant—a plant, incidentally, that will not be employing "brainy researchers."

Company representatives quickly narrowed down the area in which they would like to locate, selected a site and easily negotiated problems of purchase, construction and taxes. But before they would sign a contract for the site, they went to see the superintendent of schools.

"They visited me several times and had me up to Chicago, too," the superintendent told a SCHOOL MANAGEMENT editor last spring. "They checked our school buildings, our courses, our finances, our plans. They wanted to know everything about the operation of our educational plant.

" 'We are not going to have college graduates predominating in this new plant,' they told me, 'But these will be middle-income, skilled craftsmen and they, too, want the best in education for their children. They will not come here unless the schools are of the quality they want. And we will not move our plant without these skilled workers." **End**

LABORATORY SITE SELECTION

Schools for children

	Maximum Points	Capital City	Medium City	Suburbville
Pupil-teacher ratio	50	25	25	35
Instruction dollar per pupil	25	0	15	25
College preparatory program	25	0	15	25
Other factors:	30	10	15	25
Size of system				
Condition of facilities				
Public-private school ratio				
Totals	**130**	**35**	**70**	**110**

To keep your schools spotless, see the man from National Chemsearch. He'll be glad to give you on-the-spot assistance with your cleaning problem.

To cut floor cleaning time in half, he'll recommend CHEMSEARCH CONCENTRATE.®

The cleaner that lets one man do the work of two . . . and do it better! Chemsearch Concentrate is safe for all washable surfaces . . . eliminates scrubbing and rinsing! Penetrates deep into pores, floats dirt to the surface for easy removal. Write for free, descriptive brochure.

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"THANKS TO OUR BUSINESS MANAGER, THE CUSTODIANS,

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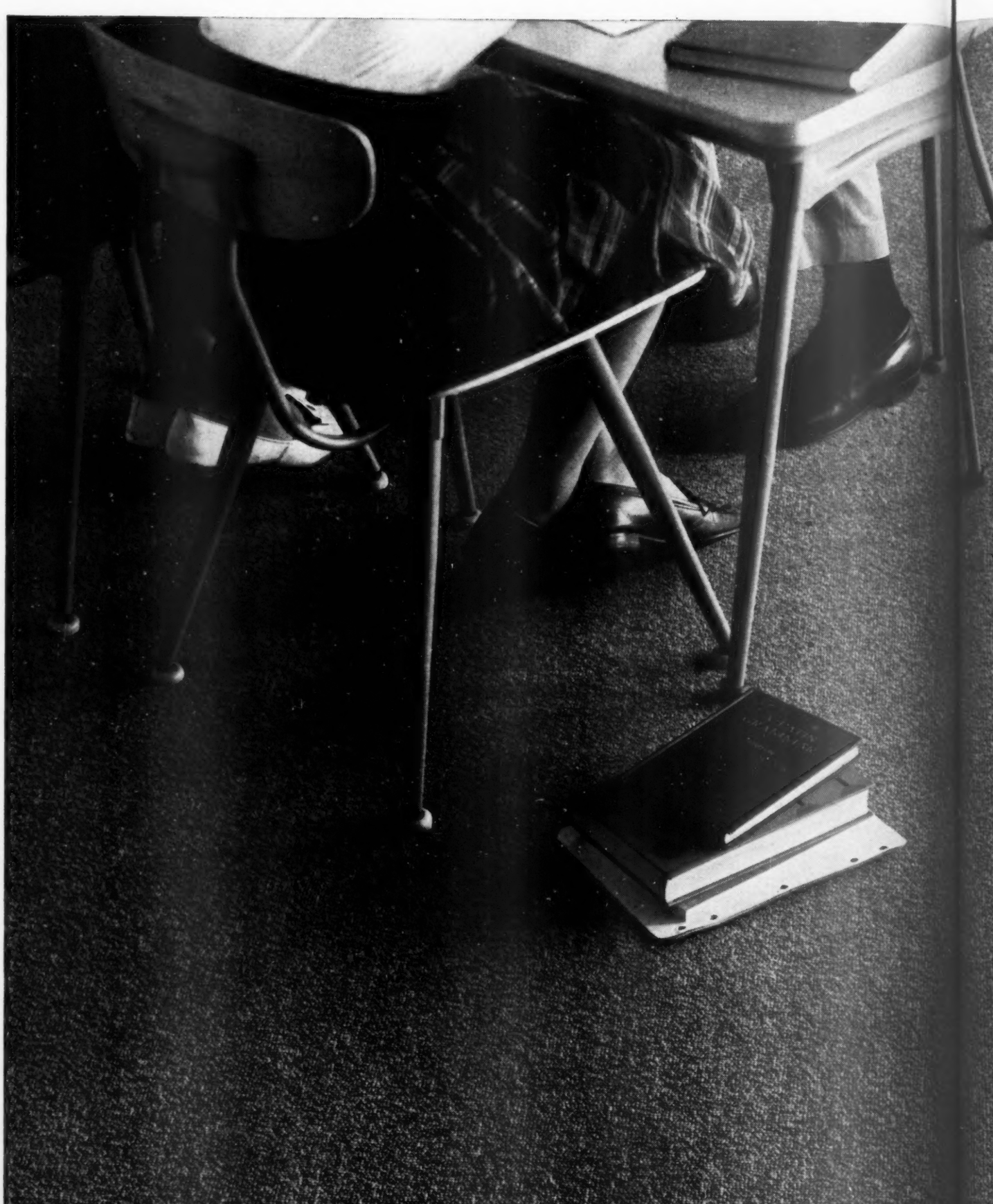

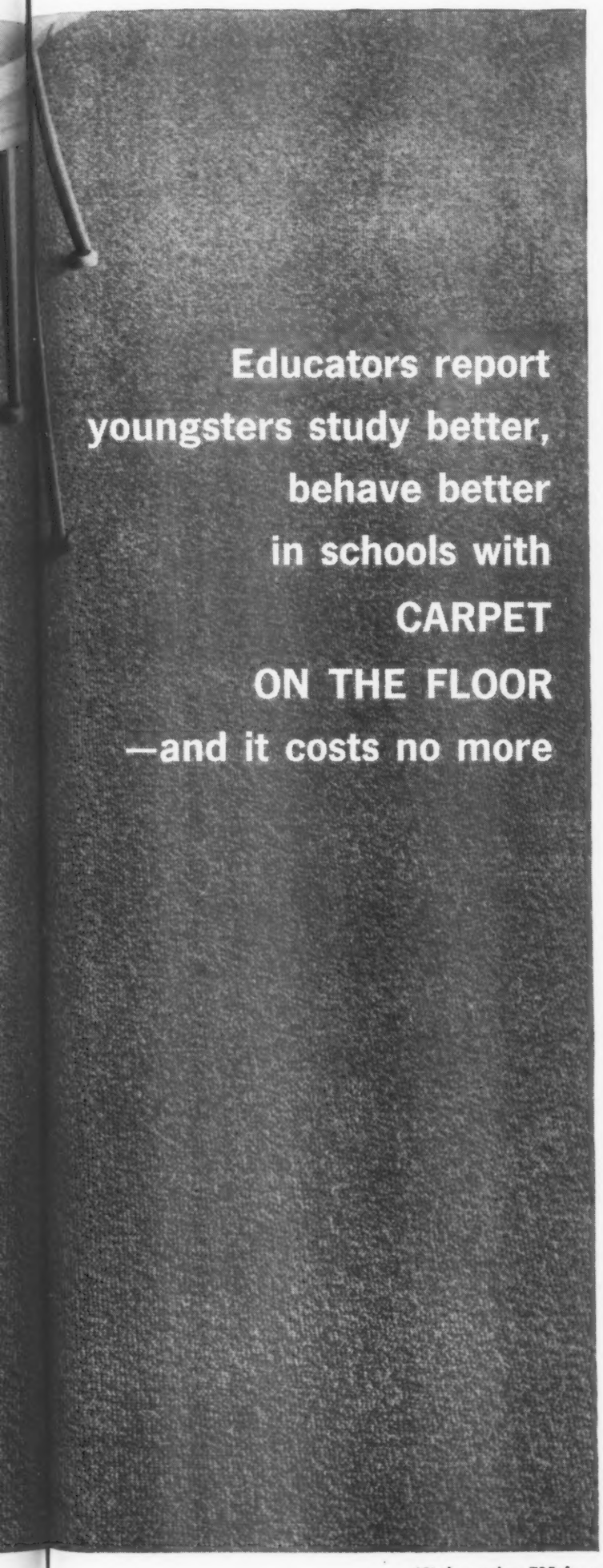

Educators report youngsters study better, behave better in schools with CARPET ON THE FLOOR —and it costs no more

Lees® CARPETS ...THE ACOUSTICAL FLOOR COVERING

Based on carpeting tested in classrooms and corridors in the South, Midwest and East, educators report that with quiet carpet underfoot, study habits improve; with soft carpet underfoot, discipline improves; with the homelike feeling of carpet underfoot, manners improve. Concentration is keener, voices lower, disruptive noises fewer, rapport closer between students and teachers.

The learning-teaching benefits are matched by long-range economy. In the long run, including replacement, carpeted floors cost no more than hard-surface flooring. You pay a bit more for carpet initially, but maintenance-costs are less than half those for hard-surface floors.

We at Lees are happy to be part of this new kind of educational thinking. We have developed a special group of exceptionally durable carpets that meet school requirements and budgets. And we have factual data that will be of tremendous help to you in your plans for new plants or replacements. Just mail this coupon today.

Loomed for lots of living— those heavenly carpets by Lees®

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Please send_____copies of School Carpet Data

My name_____

My position_____

Home address_____

City_____ Zone____ State_____

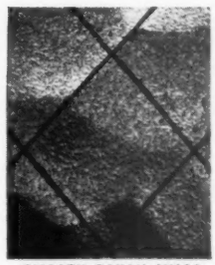
Name of school_____

(Circle number 735 for more information)

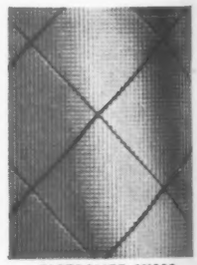
WHERE *Daylighting* SCORES HIGH

North Salinas High School, Salinas, California,

in which approximately 2,000 sq. ft. of Mississippi's Smooth Rough MISCO wire glass has been installed in skylights.
Architect: Jerome Kasavan, Salinas, California
Puttyless Aluminum Skylights by O'Keeffe's, Inc., San Francisco, California



SMOOTH ROUGH MISCO



FACTROLITE MISCO

HAMMERED MISCO

SYENITE MISCO

Broad bands of beautiful, rugged, Smooth Rough MISCO wire glass in the new North Salinas High School, Salinas, California, are the "best things under the sun". For these large skylights help brighten the entire gymnasium without glare or harsh shadows. Architect Jerome Kasavan and consultants selected translucent Smooth Rough MISCO to provide high-level diffused daylighting in a virtually windowless area, to make seeing easier, reduce the need for artificial light and accomplish a feeling of spaciousness.

Smooth Rough MISCO wire glass is a handsome pattern in keeping with modern architectural trends. And MISCO offers positive protection as a fire retardant in skylights, windows, partitions, doors and wherever else fire and breakage protection is a requisite.

When you build or remodel your schools, make the many distinct advantages of light diffusing glass part of your plan. Specify glass by Mississippi. Available in a wide variety of patterns and surface finishes at better distributors everywhere.

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WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

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SM NEWS OF THE SCHOOLS

A digest of current happenings in public education

Teacher moonlighting hit in North Carolina

The practice of "moonlighting"—working a second job—by teachers has been attacked by the North Carolina state board of education.

In a policy statement calling on teachers to devote full time to their jobs, the board said that it "believes that no professional school employee can serve effectively while dividing his loyalties between two jobs.

"During the school year, no teacher or school administrator should be a part-time farmer, a part-time recreation worker, or be engaged in any other part-time work. If he is this makes him necessarily a part-time teacher or school administrator."

The board did not state how many hours a day should be devoted to a person's school job but said that a minimum day must be one long enough to "provide adequate instruction for pupils."

In North Carolina's behalf, let it be said that the state is making a real effort to attack "moonlighting" at its cause—low teaching salaries. Under a "quality education" program being pushed by Governor Terry Sanford, teacher salaries are getting a large boost this year.

Federal lunch funds turned down by board

Federal lunch funds were rejected this year by school officials of Midland, Mich., who then acted to make the cafeterias pay their own way in local money. The price of a half-pint of milk was increased to six cents from three cents; a hot lunch advanced to 45 cents from 35 cents.

After the decision, which was the result of a three-three vote of the school board, Superintendent Ernest R. Britton told newsmen that the seventh board member, who was absent, would also have voted against accepting the subsidy again. It would have provided $11,750 toward a cafeteria budget of $79,000.

In turning down the subsidy, school authorities expressed the same sentiment that is being expressed by Midland municipal officials, who seem determined to have Midland take care of its own. The city council has refused to apply for $250,000 in federal aid for water-sewer improvements for the Michigan community of 30,000. It has rejected flood-control funds, too.

Although Midland residents were divided along with the board on the cafeteria issue, the decision stood. The board members who prevailed claimed they had strong community support for their policy.

Teaching certificate refused because of old conviction

An Oregon teacher has been refused a teaching certificate because of an eight-year-old larceny conviction. The state board of education, by a four-to-three vote, upheld the ruling of Dr. Leon P. Minear, state superintendent of public instruction.

The teacher, Dean Bay, had been a policeman in Goldendale, Wash., eight years ago when he was arrested and charged with grand larceny. He served 18 months in jail but later had all his civil rights restored. After his release from prison he worked his way through Eastern Oregon College and received his bachelor's degree from that institution.

Bay had received a one-year temporary appointment as a teacher in Weston, Ore. When he applied for the permanent certificate this year, he was supported by a petition signed by 80% of the adult population of his community.

In refusing certification to Bay, the board agreed that he has been rehabilitated but said that it had to think first of the rights of the chil-

continued on page 48

Too good to miss . . .

Quart . . . Elementary school children in Toledo, Ohio, are drinking their usual quart of milk a day this year, but the half-pint they get in school is no longer chocolate flavored. The school board—on advice of the Toledo Dental Society—has banned chocolate milk in the schools because it contributes to tooth decay. The flavored milk had been favored by 82% of the students.

Court . . . When high school students aboard a Waukegan, Ill., city bus started a rumpus, driver Clarence Dube didn't bother to stop and try to silence them. He drove his bus nonstop to the police station. "I've had enough swearing, obscenities and firecrackers from the high school crowd," Dube said, as he turned his passengers over to court authorities.

Port . . . It may be any port in a storm for most of us, but for first graders, storm or no storm, if they don't get to the right port they're in trouble. In Lisbon, Conn., they've come up with a unique method for directing youngsters to the right port—or school bus. Each of the buses has a character from the Popeye comic strip painted on its side. Children are taught to travel on the Whimpy, Olive, Swee'pea or Popeye bus. So far, no lost students this year.

Sport . . . This item from New York City makes us wonder whether high schools are engaging in sports—or sending their boys off to war. The football game between Abraham Lincoln and Thomas Jefferson high schools was played in secret this year because feeling between the two student bodies is so high. Only "authorized" spectators were allowed to see the "game."

"IN FAIR WEATHER AND STORM, MY LAST DODGE SCHOOL BUS WENT 108,000 TROUBLE-FREE MILES. I drove that bus for nine years. And it's still going strong for another owner. My present Dodge is a model S500 with a 202 hp. V8 engine. It's just finished its first year on a 250-pupil, 100-stop route. I'm getting more than eight miles to a gallon, and the Dodge hasn't lost me a day or a dime. I've been carrying school children for 38 years, 21 of them in Dodges. You just can't beat a Dodge for dependability and performance." FRANK REGO, FALMOUTH, MASSACHUSETTS

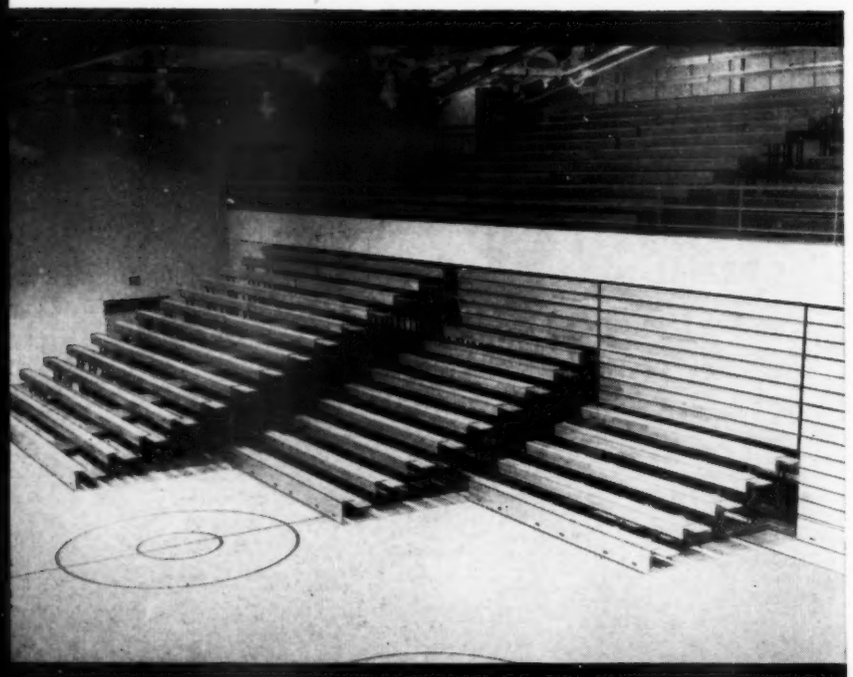
FRANK REGO, OF FALMOUTH, MASS., WITH HIS 1960 DODGE MODEL S500.

DODGE SCHOOL BUS CHASSIS FOR 1962 FEATURE MORE THAN 50 ENGINEERING ADVANCES that make them tougher, more tight-fisted than ever. In every respect they meet or exceed specifications set down by the National Educational Code for the protection and safe transportation of school children. And they're priced to compete with every other school bus chassis on the market. Dodge chassis are loaded with safe and saving ways. Year in, year out, they'll cost you less to operate and maintain. See your nearest Dodge Dealer.

DODGE SCHOOL BUS CHASSIS

(Circle number 765 for more information)

get versatile gymnasium seating for your new or present school building



SAFWAY

TELESCOPING GYM SEATS

permit quick, easy set-up changes for every gymnasium event

YOU CAN assure profitable *full-time use* of your school gymnasium —planned or existing—with this modern equipment, available in recessed, wall-attached, movable and reverse-fold types. Seating set-up changes are made quickly to fit every event. Any number of rows can be locked open (*see photo*). Safway telescoping gym seats give you these practical advantages:

SPECTATOR COMFORT—Good sight lines from every seat. Ample foot and knee room; comfortable inclined seats.

COMPLETE SAFETY—Full protection for spectators, gym users and maintenance personnel.

FLOOR PROTECTION—Non-marking wheels roll in separate tracks to prevent grooving.

EASY OPERATION—Straight-line tracking with extra-large wheels and nylon glides. Motorized operation available (*not needed under 14 rows*).

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(Circle number 750 for more information)

dren who often look upon their teacher as a hero.

Parole officials have expressed dismay over the action. "Bay is an outstanding example of rehabilitation," said Chief Probation Officer Robert Smith. "He made a mistake, but he has never hidden it. We feel that he has more than paid the price."

Bay has since accepted a job in a private school in Washington, but he still has only a temporary certificate. Next year he must face that hurdle again—this time before Washington's board of education.

Teachers do "homework" to explain district program

Teachers in Hauppauge, N.Y., are voluntarily doing extra homework, in order to get across the district's educational program.

"Homework" in this case, means visiting the homes of parents and other interested persons in the school district. At the drop of an invitation, two or more of the district's teachers are dispatched to a specified home to discuss prearranged topics with 10 to 12 neighbors.

The arrangement was the idea of the district's classroom teachers association. Teachers volunteer their services without pay. Last year, the first that the plan was in operation, 80% of the district's teachers took part in the program, speaking at 40 individual home meetings.

"We don't hope to visit everyone," says Mrs. Richard Carr, librarian and program chairman, "but much of the information discussed at these get-togethers is passed on by the parents to other parents with whom they come in contact."

Meetings are limited to discussing district problems, programs and policies but all questions on these subjects are answered as completely and frankly as possible. Individual personal problems are referred to the specific teacher or administrator involved.

Fairy tale, barred from school, presented in church

In White Plains, N.Y., a teen-age theatrical group, prevented from putting on a production in the high school auditorium, found refuge in a local church. The play was barred, according to its sponsors, because

continued on page 53

Ithaca Senior High School, Ithaca, N. Y. Architects: Perkins & Will, White Plains, N. Y., & Chicago, Ill. Two-story classroom buildings are glazed with *Parallel-O-Grey*® Plate Glass. Enclosed connecting corridor features clear *Parallel-O-Plate*®.

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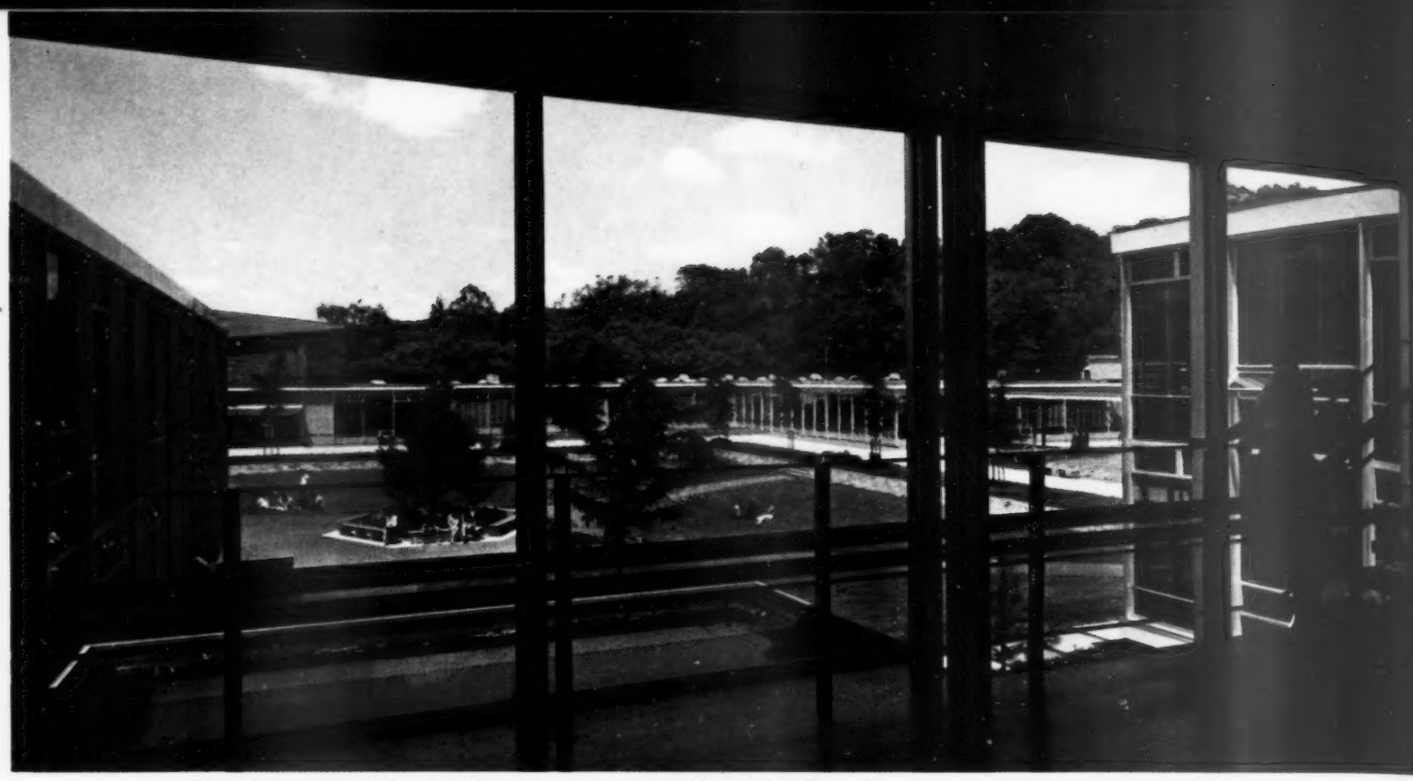
visits a school where the

Open World is a Teaching Aid

Education is enlightenment. And in the new high school in Ithaca, N. Y., that concept is put into practice. For this school is a pace-setter in the trend toward a greater sense of educational freedom and a more meaningful school architecture.

Built on a campus plan, this school is a complex of nine buildings, connected by open and closed corridors. It's a place of wide walks, open courts and expansive walls of glass—reflecting the philosophy Ithaca educators wanted built into it.

Entrance to the school campus. Auditorium at left, two-story classroom building at right, single-story Administration Building in center.



View from second-floor corridor shows long wall of *Parallel-O-Plate* Glass in connecting single-story wings.

Supervising Principal Frank R. Bliss explains it this way. "We want to give our students all the freedom we possibly can, both in their actions and in the atmosphere of their surroundings. Our students come and go—just so they meet their scheduled classes and activities. You won't see any corridor guards. And you won't see teachers herding students from one place to another.

Supervising Principal
FRANK R. BLISS
"Architecture complements the educational concept."

"We feel, too, that school architecture should complement and encourage this educational concept. And we believe ours does—in the openness of its campus arrangement, and in the design of the buildings themselves, with their expanses of glass which encompass the student without 'imprisoning' him from the world outside."

Lawrence Bach, Head of the Science Department, is dedicated to putting that educational philosophy into action at the classroom level. He speaks for the entire school faculty when he says, "We couldn't be happier with our school. It's a pleasure to teach here."

And the kind of student freedom you allow here hasn't caused any attendance problems or classroom laxity?

"If anything, attendance is better than ever. Students *like* coming to school here. They are more receptive to learning, and more responsible in their work."

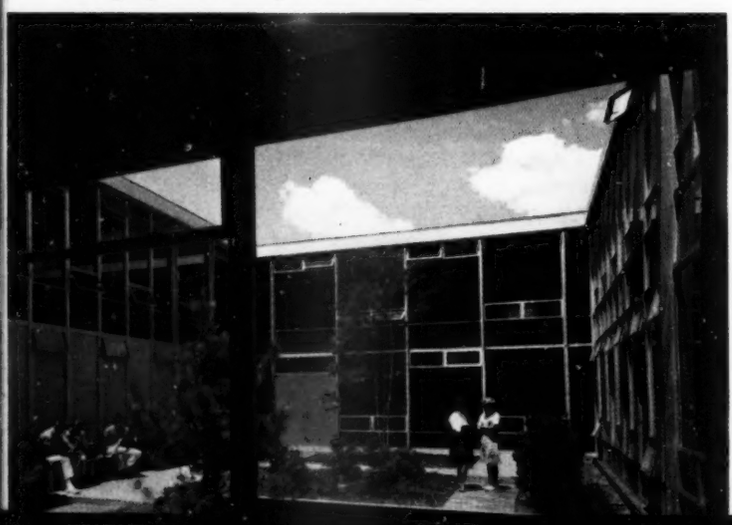
As a teacher, do you favor this extensive use of glass?

"I do, indeed. Especially as a science teacher. I teach the phenomena of life—and there life is, going on right outside these big windows. We see in action what we study in the classroom. The growth of plants. The flight of birds. The antics of squirrels. The real world becomes part of our classroom world."

With all this glass, what about glare?

"These windows are grey glass which subdues glare from outside. Yet there's plenty of natural daylight for all ordinary classroom work. The only time we use artificial light is for close work with microscopes."

Students enjoy open patio in center of classroom building during nonscheduled periods. Natural light pours into inside corridors through glare-reducing *Parallel-O-Grey* Plate Glass.



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Does the increase in natural light interfere with visual aids?

"That's no problem. Venetian blinds or very light shades are all that's needed. In fact, some of the newer visual-aids equipment is strong enough so that no shades of any kind are required."

Head of Science Department
LAWRENCE BACH
"Life in action outside big windows."

But a school is created for the benefit of its students. And the proof of its success lies with those students. Ann Mosher, Vice President of the Student Council, speaks for the student body. "We love it. We feel it's a better place in which to learn. It makes us want to come here. Gives us a desire to do our best. Maybe it's a kind of challenge to us to be worthy of it.

Vice President of Student Council
ANN MOSHER
"A challenge to do our best."

"And we like the 'college-campus' feeling—and I think this campus environment will help those of us who go on to college to adjust more readily to that new life. I guess, to sum it all up—it makes us feel more grown up. We appreciate that, and try to live up to it."

Making a school function properly is not just a desire on the part of administration, faculty and students. There are the practical aspects of maintaining buildings and grounds, of providing all the physical facilities to keep the school operating efficiently.

Two walls of this interior conference room in the Student Activities wing are *Parallel-O-Plate* Glass to separate activities, yet maintain a light and open atmosphere.

Plant Manager Rollin Hood admits, "It's a big job. And it's going to get bigger. The key to the whole design of this school is 'flexibility'. So it can grow. Right now, it can handle 1600 students in grades 10, 11 and 12, and it's planned for future expansion up to 1000 more. Also, its facilities serve our entire community, evenings and weekends the year 'round.

"Maintenance of the nine buildings and campus is a big job. But we do it with seven men plus student help. In fact, my student crew cleans the entire school every day in just one hour. It's a system I'm kind of proud of. And we even save money with it —saved $22,000 in maintenance costs last year on just one building!"

Does this kind of building create heating difficulties?

"The campus arrangement of buildings puts a little heavier load on heating. More outside wall space open to the weather. But other advantages more than make up for that."

Laboratories, shops and workrooms are separated from twin classroom buildings by a broad, central court.

Plant Manager
ROLLIN HOOD
"Maintenance plan to be proud of."

How about keeping heat out in summer?

"Our twin two-story classroom buildings have *Parallel-O-Grey* Plate Glass all around. And that seems to help control heat. At least, we've had no complaints from anybody about overheating—except in a few rooms in the single-story buildings with regular glass. But we are already planning to replace some of this glass with *Parallel-O-Grey*."

Does a greater amount of glass help reduce lighting costs?

"Many of our teachers and students, coming from conventional buildings, still have the habit of flicking on classroom lights as they enter, even though they don't need them. Once we break that old-fashioned habit, I expect to see a cut in lighting costs."

COST DATA

Area—191,180 square feet	
Unit cost per square foot (includes mechanical equipment with capacity to accommodate planned future expansion)	$ 18.60
Building construction cost	$3,556,689
Fixed equipment	188,597
Site development (drives, walks, exterior lighting, landscaping)	211,445
Athletic field development	37,800
Land, movable equipment, fees, contingencies	505,469
Total	$4,500,000

Impressive to look at, a pleasure to teach in, exciting to learn in—Ithaca High School is a worthy accomplishment for its entire community. And perhaps the final word should come from someone of that community who is outside the immediate environment of the school.

As we drove away from the school, our taxi driver—Ithaca citizen and taxpayer—said, "I bet students really *want* to go to that school. Probably learn more, too. You know, you really don't mind paying for a school like that!"

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the title, "Once Upon a Mattress" was "too suggestive."

The production, a musical that enjoyed a long run on Broadway, is based on the fairy tale "The Princess and the Pea." The amateur production was presented at the Community Church.

Superintendent Carroll F. Johnson, denied that the title of the play was the reason it had not been produced in the high school, although he admitted that a more suitable title would have been desirable.

Johnson said the group was barred because it had not been able to establish its financial responsibility for possible physical damage to the school. When it had presented a previous production early in the summer ("Li'l Abner" was the non-suggestive title), the group had been sponsored by the city's recreation department. This sponsorship had been terminated prior to production of the fairy tale.

Schools cannot bar married students, Ohio ruling states

Married students are legally entitled to attend high school in Ohio, according to Ohio Attorney General Mark McElroy. Furthermore, he said, there is no Ohio statute banning high school students who are married and pregnant. A school board may, however, adopt a rule which would, for the sake of the girl's physical safety, keep her from regular school classes during the advanced state of her pregnancy. The board may then assign a tutor for home instruction.

The ruling was made in answer to Thomas E. Ray, Mt. Gilead, Ohio, prosecuting attorney of Morrow County, one of the places where questions about married students have arisen in recent months. Attorney General McElroy said the General Assembly, when setting the compulsory school age—eight to 18 years—"indicated a strong mandate that each child in Ohio, regardless of domestic position, shall receive an education in a public school or its equivalent."

Early this year, the Ohio Supreme Court ordered the Loveland schools to reinstate a high school girl who was dismissed when she married and falsified her age. She was 17 but swore she was 18.

In Cleveland, school officials have been requiring students who marry to transfer to night high school classes or drop out entirely. The officials say these youths assume adult responsibilities when they marry, and should attend an adult school. The policy has not been publicly challenged.

Houston starts major drive on drop-outs

A major drive on drop-outs has been started by the Houston, Tex., schools. The drive is being centered in the seventh and eighth grades, the years school officials consider "crucial" in the life of a drop-out.

Under the program, which has been labeled Talent Preservation Project, selected seventh-grade students have been placed in special classes. These classes, none larger than 15 or 20 students, are made up of children who are two years or more above the normal age level for that grade and who have scored two years or more below grade level on academic achievement tests.

The selected students are not required to take the standard junior high school curriculum. Instead, they are being fed a heavy dose of simplified reading and "practical" information.

Specially selected teachers concentrate on reading, writing, spelling,

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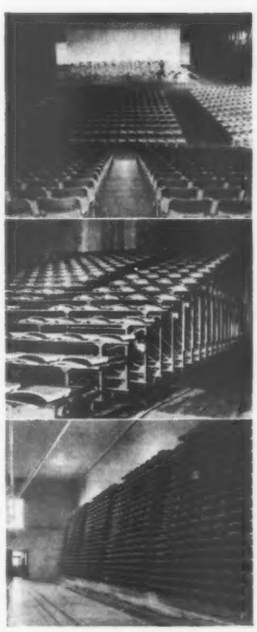

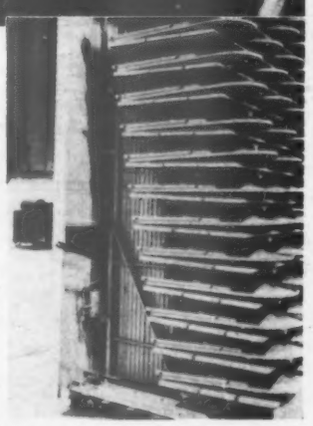

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English and arithmetic every day. New textbooks, which are interestingly written for older students but which use a simplified vocabulary, have been supplied. Short stories by Mark Twain and Lewis Carroll are among the selections.

"The important thing is that they read successfully," says Mrs. Jozie Mock, who is heading the program." Since they have failed before, they must be encouraged by success this time. They are afraid of failing again. They won't even try if they are given material that they have been unable to master before. That's why we are using all new textbooks."

In addition to the concentration on reading, students are learning such practical things as how to read maps, how to use bus and railroad time tables, and how to use a telephone directory.

Parents will learn along with children

Parents in Vernon, Conn., are getting a real opportunity to see how their children learn this year. Under a program financed by Ford Foundation funds, the schools are inviting parents of two groups of students to come to school one night a week to study under their offsprings' tutors.

Parents whose children are taking conversational French in the seventh grade will be taught the same subject every Monday night for two hours. Those who have students just learning to read in the first grade will be instructed in that subject on Tuesday nights, also for two hours.

The program is designed to inform parents of teaching methods, not to encourage parents to become teachers. But nobody in Vernon will object too violently if it just happens to work out the latter way.

On the road to school

Messrs. Bob Hope and Bing Crosby, in the company of Dorothy Lamour, traveled many hazardous roads from Mandalay to Alaska, but judging from news around the nation, none were so hazardous as the road to school.

Item: *In South Houston, Tex., city fathers have painted a white strip 42 inches into the roadway and a mile and a half long, to protect children from the hazards of passing traffic. Lacking sidewalks, the officials decided this was the most economical way to establish walking room for the youngsters.*

Item: *In Jefferson County, Ky., parents of 65 school children marched to and from school with their charges to protest the lack of bus service or adequate sidewalks. The parents were warned not to block traffic but a spokesman said the roadway was so narrow "it's impossible not to block at least one lane."*

Item: *In Novi, Mich., mothers really went to work to smooth the road to school. They blockaded a half-mile of a highway running in front of their school four times a day until police agreed to install safety measures.*

The mothers became enraged when they found that a road-widening project had left their children no place to walk next to the road. After the blockade proved effective for a few days, police gave in to the parents and saw to it that the shoulders of the road were graded. The parents, however, flushed with victory, pressed on for more. They gave the police three days to put up safety signs, and train eighth graders to work as traffic guards. If not, they said, up would go the barricades. They won.

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How to introduce

TEAM TEACHING

in your elementary schools

Whether or not teachers accept a new idea may determine its success or failure. Here is how Greenwich, Conn., is introducing a new concept—and a new building—to its teachers.

■ ■ ■ Team teaching at the elementary school level is a relatively new idea. Five years ago, there was hardly a handful of schools experimenting with it. A few farsighted communities were testing the possibilities—but only in pilot schools, and generally with close support from a foundation or a graduate school of education.

Today, team teaching on the elementary school level commands wide respect. Systems that tested it in one school are using it in two or more, and pilot programs are being started by an increasing number of communities. Most significant of all, new elementary schools designed *specifically* for team teaching are being built in cities from Massachusetts to Michigan to Florida.

One of the early pioneers was Dr. John Blackhall Smith who, in 1957, as superintendent in Lexington, Mass., experimented with the idea in one of that city's schools. (*See "Team teaching for elementary schools," SM, Dec. '58.*)

The elementary program proved so successful that the city is now investing considerably more than $1 million in a new elementary school designed explicitly for team teaching.

In its early days, however, the Lexington project ran into some difficulties. It was begun on relatively short notice, with little chance for detailed advance planning. The faculty was asked to shape the program as it went along—in effect, to improvise. And no major adjustments could be made in the building itself. As a result, Dr. Smith recalls, the first phases of the operation were *"a tremendous strain and demand on the teachers, even though they were enthusiastic and volunteered to do it."* He resolved not to work under these same limitations again.

In 1958, when Dr. Smith assumed the superintendency in Greenwich, Conn., he was convinced of the values of team teaching, but he was also wary of the many problems that Lexington teachers had had to overcome.

Rather than try to immediately introduce the idea into existing elementary school programs, Dr. Smith looked ahead four years to the prospective opening of a new school—Dundee Elementary School.

By holding off on team teaching until 1962, when the Dundee School is scheduled to open—Smith felt he could reach two goals:

■ He could select a staff long before it moved into the building, and give it a chance to work together, to develop programs and ideas and to remove the inevitable problems

that must arise when you ask a group of individuals to work together.

■ He could help to plan a school designed to meet the peculiar—and real—needs of a new concept of teaching. In short, he could work with teachers and architects to plan a school for team teaching.

The school board agreed, and planning was begun almost immediately. By April 1959, the architects had been appointed, and preliminary building studies were in progress. By that summer, the faculty for Dundee had been chosen and was engrossed in a special training program. Dundee will thus benefit from more than three years of continuous preparation before it opens next September.

A working definition

Where is all this preparation leading? What does "team teaching" mean at Dundee? How does a district prepare for an entirely new approach to education? The answer to these and many other questions were supplied to a SCHOOL MANAGEMENT editor in separate interviews with Dr. Smith, the architect of the program, and Howard Juster, architect of the school.

"I think the term is unfortunate," Dr. Smith says sharply, *"for two reasons. First, it implies that there has been no teamwork by teachers before—and this, of course, is untrue. Teachers have worked together ever since there was more than one in a building. Second, it's a very broad term that means different things in different places. On the high school level, for example, it usually means that all the teachers in each subject get together and decide who's going to teach what topic in large-group instruction. But on the elementary school level, the team covers the whole spectrum of subject matter. It's concerned not just with assigning topics but with tying them all together.*

On the elementary level, then, team teaching has three characteristics:

1. Teachers are redeployed. Instead of facing a constant group of 25 or 30 children in a self-contained classroom, each individual teacher may work at times with one student, at times with 25 or 30, at times with 100 or more. In this way, she can be exposed to all the children while concentrating on her own areas of strength.

At the same time, the teachers of each team are meeting *"with regularity—and I have to stress that term regularity—to determine who's going to teach what to whom, when and how."* This collaboration and exchange of ideas is designed to encourage more detailed, imaginative lesson plans and more enriched approaches to instruction.

"The teachers themselves determine pretty much how they're going to operate. They make the decisions themselves. And for that reason, team teaching is the first real opportunity I've seen for teachers to operate as professionals," says Dr. Smith.

2. Children are regrouped. They, too, are unshackled from the self-contained classroom and are brought together in groups whose size may vary for each lesson period. *"A group shouldn't be determined just by the size of the classroom, or by dividing the number of teachers into the number of children. It should be determined by the content of each lesson and by the teaching approach being used. To me, this is the only method that makes sense."*

The grouping may be primarily by ability. Reading groups, for example, are designated not within each classroom but among all the children taught by the team. Or the grouping may be primarily by number, as when a new concept in arithmetic is introduced through large-group instruction. *"Incidentally, every large-group meeting creates at least two opportunities for very small groups: conferences for those children who aren't yet ready to grasp the new concept —and for those who are already way beyond it."*

"I think the nongraded school is the answer to the question of individual attention. The team-teaching philosophy leads right into it."

SMITH

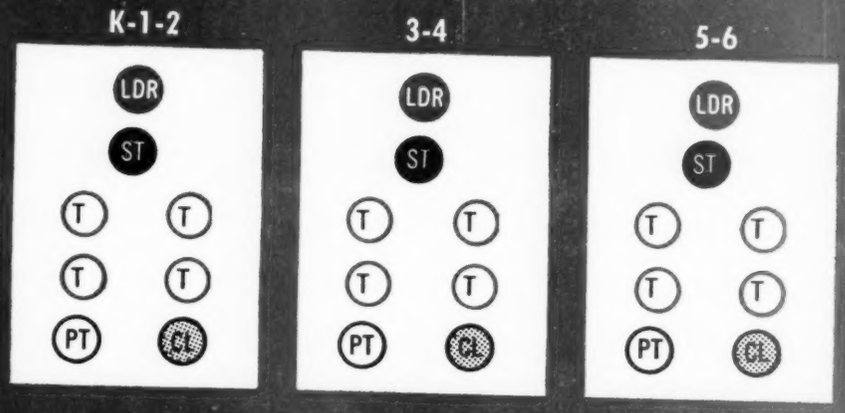
3. Flexibility is the essential. Scheduling, programing and the building itself are fitted to the instructional pattern, rather than the other way around. *"The great promise of team teaching, it seems to me, is that it permits a quicker use of the best of the new techniques, equipment and approaches to education. And the key to this is flexibility."**

** Dr. Smith's concept of team teaching is presented more fully in a pamphlet, "Team teaching: an approach to elementary school instruction," published by the Greenwich Public Schools. Free. This pamphlet is one of the best short primers now available on the subject.*

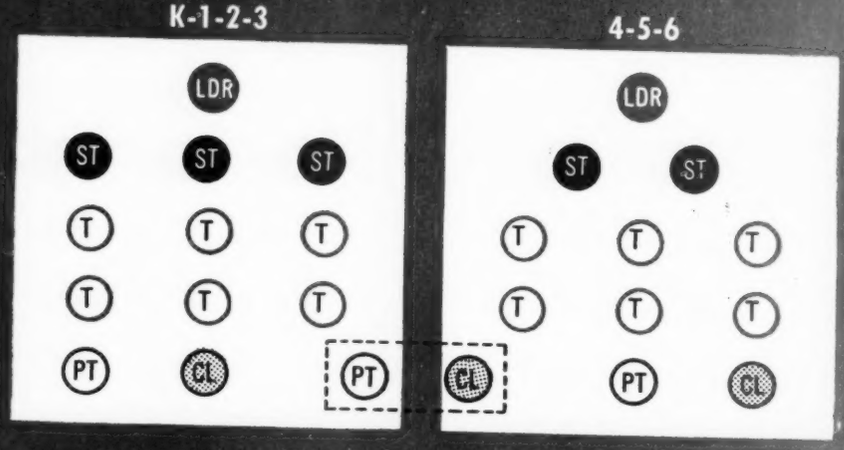
PLEASE TURN THE PAGE ►

THREE PATTERNS OF GRADE GROUPING

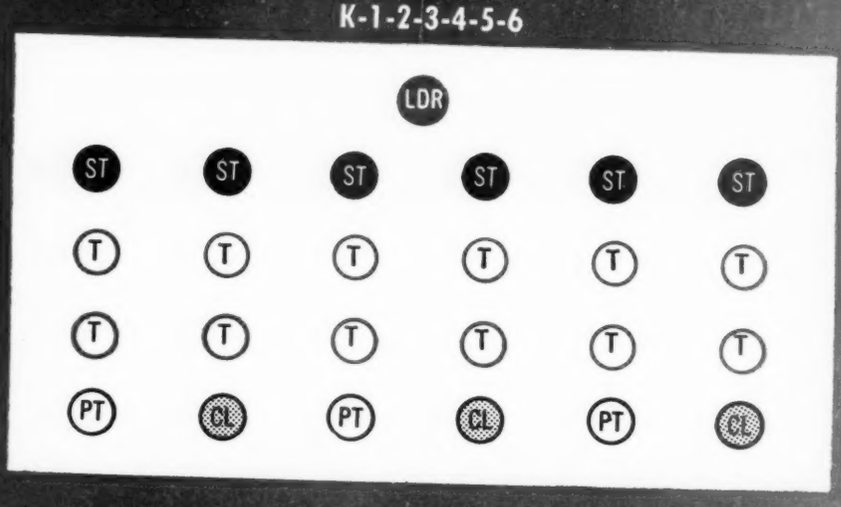
Dundee's first team organization, when it opens next September



This may eventually give way to a new team organization, featuring nongraded primary and intermediate schools



In turn, this grouping may some day yield to a final team organization, creating an entirely nongraded elementary school



KEY LDR: Team Leader
ST: Senior Teacher
T: Teacher
PT: Practice Teacher (or Intern)
CL: Clerical Assistant

I. The administrative groundwork

As with any new program, the administrative preparation for team teaching involves watching the budget, setting educational policy and keeping the community properly informed. But another all-important task is added: *creating the teams.* This requires at least three steps:

1. Determine which grades are to be grouped together

Almost any combination of grades is feasible, depending on the circumstances. The "right" grouping may be different for each school—and in any one school, may be different each year. So this decision should be continuously reviewed.

"You organize teams pretty much on the basis of the teachers you have available, trying to blend the proper personalities, the proper skills, and so on." Other factors that come into play are the number of students in each grade, their needs, their level of maturity and the normal overlapping of subject matter between grades. To direct a team-teaching program, the administrator must know the school well.

One very logical arrangement would be to have two teams, K-3 and 4-6. This would permit both a nongraded primary and a nongraded intermediate school. Ultimately, assuming the school does not become too large, you might develop a complete nongraded elementary school. There would be one team, K-6, so that the team organization is actually the whole school.

"I think the nongraded school —assuming, of course, that you could operate it—is the answer to the question of individual attention. The team-teaching philosophy, administration and programing lead right into it. If team teaching is properly organized, after it's been in operation a few years, teachers and parents will see for themselves the feasibility of the nongraded elementary school. It will develop without our trying to sell it to anybody."

When Dundee school opens next September, it will have three teams: K-2 (with seven teachers), 3-4 (six teachers) and 5-6 (six teachers). This grouping was accepted as the best approach for Dundee during its first year. But the pattern is not rigid. It is likely —in fact, almost certain—to change in the years ahead.

2. Recruit and select the faculty

If a team-teaching program is to be successful from the start, the teachers must begin planning for it at least two years in advance. This means, first of all, that they must be selected early.

Recruiting for Dundee began in the spring of 1959. *"We circularized some information about team teaching, then called a meeting of all the elementary school teachers who were interested in the subject. We devoted about two hours to explanations and answering questions. As a result of this meeting, we had 30 or 35 volunteers, whom we then screened."*

There were no preconceptions about grade groupings. Nor was any attempt made to pick specialists—a strong reading teacher, a strong science teacher and so on.

"I thought the proper way was to select teachers who could probably work best in the team-teaching situation—in terms of interest, flexibility, skill and personality. Later, as they were organized into teams, and as the teams began to formulate plans, teachers emerged who had strength and interest in particular areas. Within their teams, they became the informal leaders in those areas.

In music, art and physical education, however, Dundee will have full-time specialists—as does every school in Greenwich. These three specialists at Dundee will not be members of any specific team. Their role will be to meet regularly with each team and to serve them all.

"You organize teams pretty much on the basis of the teachers you have available, trying to blend the proper personalities and the proper skills."

SMITH

Recruiting from within the system is inevitable, unless a community can maintain two dozen teachers on full salary with no current assignments. This type of recruiting has one possible disadvantage: it may draw away from the existing schools those teachers who are most responsive to new techniques and approaches. But this loss, if it occurs, should be offset by the feedback of new ideas into the existing schools from the team-teaching program.

3. Let leaders develop—and recognize them

During these years of preparation, two positions of leadership—team leader and senior teachers—must be filled in each team. Dr. Smith dubs *the team leader* "sort of a sub-principal." He presides at the team meetings, organ-

izes schedules, coordinates the activities, provides for recordkeeping and serves as liaison with the principal. He also is directly responsible for the teaching at one grade level serviced by the team. Each of the other grades is usually represented by a senior teacher, who handles special assignments and is primarily responsible for activities on her grade level.

Dundee, when it opens, will have three team leaders and three senior teachers to cover the seven grades. All were appointed by Dr. Smith—*"but we went through quite a bit of discussion and committee assignments on this matter, during almost two years, before I made the appointments. People had plenty of opportunity to demonstrate that they were natural leaders."*

The positions will probably command a pay differential, though no definite decision has yet been reached. *"My personal opinion is that they should, because these people will have added responsibility—and they're certainly going to put in more time."*

At the other end of the team, supporting positions at Dundee remain to be filled. *"Team teaching is ideal for training, because it offers such intimate contacts. The young teacher is no longer shut in by four walls; she has continuous opportunity to work with several experienced teachers."* For that reason, Dundee expects to attract both practice teachers and part-time interns, who will assist in the teaching and take on certain routine assignments. They may, for example, supervise the large-group meetings and groups of children doing seat work, thus freeing the regular teachers for more professional activities.

Each team will also have a full-time clerical assistant, or team secretary, who can manage the ordinary paperwork—duplicating materials, checking records, keeping track of lunch money, and so on. Thus the teachers will have the time they need to plan and develop team lessons.

The principal's role

"The role of the principal is radically changed. In a conventional school, he works with all 25 or 30 teachers, but he never sees any of them very often. Everyone is pretty much on his own. With teams, the teachers work closer together, and the principal deals mostly with the team leaders." He delegates much of his operational responsibility to these leaders and spends more time evaluating the program in action and providing over-all instructional leadership.

The principal's responsibility is changed but not diminished. He remains the leader of the school, supervising each team and coordinating all their activities into a single dynamic process of education.

"I am completely convinced that team teaching succeeds or fails in a very large degree because of the principal. He must have great energy and imagination. Certainly he must be a master at handling personalities in the intimacy of team discussions. Above all, he must be convinced that education can be tremendously improved."

At Dundee, the principal and the three team leaders will meet regularly as a school cabinet, to insure that this coordination is effective. (There will also be a separate instruction-council, consisting of the team leaders, senior teachers and the specialist teachers.)

Cash and tarry

Once it goes into operation, team teaching is somewhat more expensive to maintain than a conventional program. The most predictable extras appear on the payroll: salaries for the clerical assistants, differentials for the team leaders and senior teachers. *"In addition—and this is one of the most interesting things about team teaching—there is a greater demand for supplies. In the team meetings, teachers exchange ideas and learn new ways of doing things. They're continually being stimulated to different—and hopefully, better—approaches, which require more materials and equipment."*

This added expense may frighten some communities away from team teaching, but it ought not to be exaggerated. The first schools to try it had no experience to guide them; there was bound to be some waste at first, and they needed foundation grants to help them get off the ground. But this is no longer the case.

Communities that begin now to plan for team teaching have a pool of experience to draw on. The Harvard Graduate School of Education is developing a bibliography of material that a superintendent and his staff can refer to. Key personnel can visit team-teaching schools and watch them in operation. *"I think any school system can get the guidance and assistance it needs without a foundation grant—though a lot of people might not agree."*

The financial demands can be exaggerated, but the demands of time cannot. *"You need ample*

continued on page 121

"I think any district can get the guidance and assistance it needs without a foundation grant—though a lot of people might not agree."

Educational research is plentiful, but you may be wasting your time unless you know where to find the information you need. A new service is available to point you in the right direction. Here's an example of how it can help.

How to make research worthwhile

By PHIL HIRSCH

■ ■ ■ There is more research done in education than in practically any other subject. Unfortunately, most of it is not being used.

Why? Because it is too difficult to use.

For the schoolman investigating the possibility of installing language laboratories, teaching teams or television in his schools, the volume of available research is staggering. For example, in the three years since NDEA, more than 50 research projects have been undertaken under Title VII on the subject of educational television alone. This does not take into account additional hundreds of doctoral theses, foundation-sponsored experiments and learned articles.

No superintendent thinking about ETV for his district is expected to read everything that has been written on the subject; nor will all the research really help him. Before he can even begin to cull from the available information, he must know which portions will offer him practical solutions to his particular problems.

Through a new service sponsored jointly by the Office of Education and Cleveland's Western Reserve University, it may now be possible to pinpoint the research that can help you. Known as the Research Information Service (RIS), it will provide you with a bibliography of research studies and abstracts on any of dozens of specific subjects. There is no charge.

RIS accomplishes this through the use of an electronic computer. Programers read through dissertations, federal and fund-supported research, books, magazines and other sources and code it for storage on the computer's magnetic tapes. When you have a specific question to be answered by research, it is fed to the machine, which will then sort out and print a list of references pertaining directly to your question.

100,000 per hour

The machine is capable of scanning as many as 100,000 coded abstracts per hour and assures you of fast comprehensive coverage. (By comparison, most of the published research indexes contain only about 35,000 references.) In most cases, RIS would be able to provide a complete bibliography within a week after you send in your inquiry.

Since RIS is now only a pilot project, and has been in operation less than a year, only about 1,600 pieces of research are "known" by the computer. By the time its federal grant expires next April, about 4,000 entries will have been made. Half of this material is on such subjects as ETV, teaching machines and other communicative techniques. The other half covers general educational research—curriculum, vocational education,

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About the author

Mr. Hirsch has joined the staff of *School Management* as our Washington columnist. In his new capacity he will look for stories in and around Washington that can be of practical help to schoolmen throughout the U.S. He currently serves as a columnist for a number of publications in the government and institutional fields.

building design, teacher training and finance, for example.

You can utilize the services of RIS today by sending reference questions to the Center for Documentation and Communication Research, School of Library Science, Western Reserve University, Cleveland 6.

What kind of information can you get from RIS? Suppose you had five questions about ETV, each question on a specific topic. By going to the references provided by the machine, here's what you might find:

How does television affect student response?

■ Two educational television stations in Pittsburgh spent nearly two years attempting to improve the quality of student response to televised instruction. A general science course was given to 120 public and private school classes. Special lessons, requiring students to respond during the telecast, were developed. The lecturer asked a question, then instructed his viewers to give the answer orally, silently or in writing at various times throughout the entire experiment.

Tests of this technique were made both with programed lessons (similar to those associated with teaching machines), and with conventional lessons. Separate audiences of active and passive responders were tested with each type of lesson.

The results suggested that when used together, programed TV lessons and active responses produced a significant increase in achievement when compared with conventional TV lessons and passive responses.

Another objective of this same study was to determine if TV lessons revised after their initial showing would affect test scores. Sample lessons were given, then revised to clarify points that students found difficult. The revised lessons were then shown to other control groups. Tests scores were as much as 26% higher on the revised lessons.

The study also showed that if students (rather than adults) demonstrated experiments on television, more response was generated among viewers.

Can television teach languages?

■ A televised aural-oral French course was given to fourth-grade classes in Boston; the lessons were followed by teacher-directed drills in class. Students drilled by teachers fluent in French consistently achieved higher test scores than students drilled by non-fluent teachers. Indications were that television, by itself, cannot teach a language effectively.

This study also indicated that televised language lessons can be introduced effectively at the elementary level, if they are accompanied by teacher-directed follow-up.

Should college prep courses be taught on television?

■ During the summer of 1960, school officials in Miami, Fla., televised instruction in three college prep courses—world civilization, introductory English and symbolic logic—to all high school graduates who were planning to attend college in the fall.

The study indicated that college prep courses can be taught effectively on television. Based on a comparison of scores on an identical test battery, students who took the television courses scored about the same as students who took the courses in their freshman year at the University of Miami.

Enrollment in the college prep courses was disappointing, however. Only 66 students took them, although more than 3,600 were eligible. This is significant in view of the fact that no tuition was charged for the televised lessons.

Will ETV help students of low aptitude?

■ A research team at the University of Houston made an exhaustive study of the relative effect of television on students of varying abilities.

Four hundred and twenty-two students in seven urban and three rural schools were involved in the study. This group, most of whom were seniors, took a high school physics course. About half of them received conventional classroom instruction exclusively. The other half received three televised lectures a week, along with two periods of classroom instruction.

The results of the experiment tended to show that students with lower initial aptitude for the subject gained more from the televised lessons than did better prepared students. At the end of the year, all students taking the televised course received comparatively equal scores on the final examination, though there had been great diversity in their initial knowledge of the subject.

The report of the Houston study includes a rather detailed analysis of the attitudes of both teachers and students toward educational television. The researchers conclude, not unexpectedly, that "teacher attitude [is] closely associated with the success of student learning by television." Rather significantly, however, the report adds that "where the techniques of team teachers [were] properly developed, and made effective, the attitudes at the conclusion of the project tended to be constructive and wholesome." In other words, careful planning of the team teacher's job, followed by careful indoctrination, can do much to enlist the cooperation of those staff members who consider television a threat to their jobs and an unsatisfactory educational medium.

Who can teach on television?

■ In an experiment at Syracuse University, experienced and inexperienced teachers presented similar lectures to matched college classes. Half of each lecturer's time was spent on television, the other half in a classroom. It was found that every teacher was as effective in one situation as the other, and it mattered little whether he was in the classroom or on the air. Experienced teachers seemed to find the transition from classroom to television easier than novices. **End**

WHY TEACHER RECRUITING FAILS

Questions this article answers:

When is the best time to make a recruiting trip?
What is—and is not—important to a teacher candidate?
How long should an interview last?
What should you tell a teacher candidate?
What must you know about your own school district?
When should a contract be offered?
How can a college placement office help you?

You may have just 15 minutes in which to decide whether or not to hire a teacher for your district. The way you use those few minutes may, to a large extent, determine the quality of your schools during the next year.

If you make the right appearance, see the right people, ask the right questions and give the right information, your recruiting trip will be successful. If you fail at any one of these points, chances are the best young teachers will be in some other district next fall.

When and how should you interview teacher candidates? What is—and what is not—important? For answers to these questions, a SCHOOL MANAGEMENT editor visited the placement office at George Peabody College, Nashville, Tenn., a leading teacher-training institution.

In the following tape-recorded interview, Dr. James Windrow, professor of education and director of personnel services and Miss Peggy Kern, acting placement director and 1961 graduate, tell why some recruiters succeed and others fail.

Q *Dr. Windrow, what is the single most important cause of failure when a recruiter comes here to hire a prospective teacher?*

WINDROW: I would say lack of information is the shortcoming I see most often. Recruiters come knowing their salary schedule and they usually have a pretty good idea of the positions they want to fill. They need a lot more information than that. Teacher candidates are in great demand today and our students have a wide choice of opportunity. We find that in most interviews, it is the students who ask the questions—and the recruiter had better be prepared to give all the answers.

Q. What do you mean by "the students ask the questions"?

WINDROW: A few years ago, the recruiters who came here did all the talking. Now it's the other way around. The students are inquisitive. They have been alerted in their classes to the problems and possibilities facing schools. They are asking the superintendents who come here the correct questions. They are asking, "How good is your school system?" And they want a straight answer.

Q. How important is a district's reputation? Does a "high visibility" district, like Evanston, Ill., or Scarsdale, N.Y., have a better chance of getting a teacher than a less well-known neighbor?

KERN: I'd say it does. These are the districts where things are happening. And these students want to get in on new developments. Of course, other factors have to be considered too, but when the superintendent from one of the well-known districts comes to the campus, we have no trouble lining up candidates for him to see. That's not always true for unknown systems.

Q *How can a district establish a reputation for itself with your students?*

WINDROW: One of the most important factors would be the quality and skill of the man sent down to do the recruiting. If he is an attractive and enthusiastic person, with ideas and the ability to convey them, that means a lot in getting good people. After all, to most of our students the recruiter *is* the district he represents. He is all most of the students know about it. So he's very important.

Q. How important or useful is a recruiting brochure?

KERN: Some of them are extremely helpful, some are not. But in terms of introducing the districts to the student, they are far less important than the recruiter himself. In most cases, students don't look at the brochure until after they have become interested in the district.

Q. Then the quality of the recruiter is the key. Other than information about the district, what can a recruiter do to establish—or destroy—his district's image?

KERN: I'd say the first step in *destroying* your chances of successfully hiring a teacher is to show up late for your appointments. It takes several days to line up a group of students to meet a certain schedule. If the recruiter is not here on time—and ready to go to work—it can be a fatal mistake.

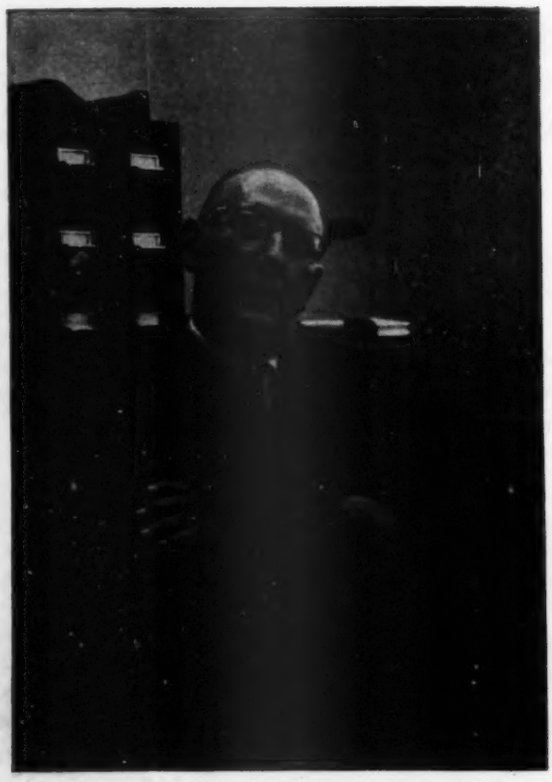
WINDROW: His attitude toward the interviews can be very important. These students are keen and alert. They want to teach and they're full of enthusiasm. They sense the recruiter's own feeling about his district. He has to be pretty enthusiastic. I've seen some men come in here whose systems were not so good, but there would be something about the man's personality that was infectious. He'd walk off with three or four of our top candidates.

Q. In other words, it's not very wise to come here after a long and tiring week or two on the road?

WINDROW: Not unless you're the kind of person who can be enthusiastic and sincere after a grind like that. If I were a recruiter, I would try to be fresh at each new place I hit.

Q. How about personal characteristics such as dress, smoking, use of language?

WINDROW: To some students they



"The recruiter should do as little talking as possible. But he should be ready to answer any questions about his schools."

WINDROW

are important; to others they are not. Some students would prefer that the superintendent not smoke —and some superintendents won't hire a smoker. If a recruiter comes here wearing a sports jacket instead of a business suit, he might lose some candidates—but he might gain some others. I would say the best rule of thumb is to be natural. If a superintendent acts himself, he'll get the kind of candidates who are attracted to him. If he acts unnaturally, he's liable to eliminate his own best prospects and attract other students who would find it very difficult to work with him.

Q. Is a recruiter at a disadvantage if he is not sure exactly what teaching vacancies he has?

KERN: Yes, he is, especially if he's coming through in the spring. Most of our students have specialized interests and they want very much to obtain teaching positions where they can work in their chosen fields. So knowing the specific position that is available is very important. Of course, some recruiters who come through in the fall, do not know exactly what their vacancies will be. In these cases they are usually most interested in meeting a lot of people and getting known themselves. Then, when they have specific vacancies, they have a pretty good idea of whether or not we have good candidates for them.

Q. Are prospective teachers lost by recruiters who keep them out on a limb?

WINDROW: Very definitely. In the great majority of cases, the recruiter ought to have the power to hire the person on the spot. Once in awhile—because of salary or other considerations—this isn't possible. But if there is going to be a delay, the recruiter should let the candidate know exactly why there will be a delay and how long it will be.

Q When should a recruiter plan to come to this campus? Is there any time of year when he will be most likely to have success?

WINDROW: The best time to come, we have found, is in early spring—beginning as early as February and on into March, April, and May. At this time the students are more receptive and their records and credentials are more complete. We have many visitors during the summer when there are usually 3,000 or more students on the campus attending summer school. Most of the employing, however, is done in the spring.

Q. How about coming here in the fall—in November or December?

KERN: At that time, September is awfully far away. You're handicapped. Students don't want to sign up so far in advance. If jobs were scarce it would be different, but the better students want to shop around. They don't want to be tied down by a contract they signed too early.

Q. Let's say a superintendent did plan to come here in February or March. Should he simply show up on the campus one day and ask to see prospective teachers?

KERN: A few recruiters still do that, and it's unfortunate. Usually there is much waste of time, because we can't line up candidates for them to see on such short notice. If a recruiter wants best results, he should write or phone well in advance—at least two weeks—so that we can make arrangements for him.

Q. What information should he be able to give you at that time?

KERN: We can be of most value to him if we know what vacancies he wants to fill, how many teachers he wants, what his salary range is and how many people he will be willing to see. The more information he can provide, the easier it is to schedule the right people for him.

Q. How many interviews do you arrange for a given day?

KERN: Ordinarily, we schedule interviews at 15-minute intervals starting at nine in the morning and running until there are no more candidates. Of course, sometimes there are special problems, in which case the superintendent might want more time to spend with each candidate. But he should remember that these students have classes and they don't have time to waste. Fifteen minutes is usually sufficient for most interviews.

Q. How long should a recruiter plan to stay here?

WINDROW: It depends somewhat on the number of candidates he's going to see. If he has just one or two vacancies, chances are he could complete his work in one day. But some recruiters for large systems stay two or three days. Incidentally, that's why it's so important to be fresh and alert when you come here. With a schedule like that, it's pretty hard to maintain your enthusiasm all the way through the last interviews.

Q. Would there be any point in a recruiter's planning to spend a little extra time on the campus, talk-

"Other considerations often outweigh a low salary schedule when a young teacher is considering a position."

KERN

ing to faculty members as well as students?

WINDROW: If he can afford the time, it's a very good idea, for several reasons. First, by meeting faculty members and administrators, he can establish his own reputation among them. Sometimes our professors are very influential in sending students to a particular district—or keeping them from another. And, if they know a superintendent, they'll tip him off when they have a particularly good candidate. Another advantage: The recruiter will get to know the strong and weak points of the faculty. Perhaps there are some professors whose educational philosophy would not provide good teachers for a particular district.

Q *When a recruiter does come to the campus, how should he proceed? What should he do first?*

WINDROW: We prefer that every recruiter make the placement office his first stop on the campus. That way we know he is here and we can help him if arrangements haven't already been made. Of course, some don't go through this office, but it's better if they do.

KERN: Actually, you can never bypass this office altogether because we have the student records here. When a recruiter does try to work through an individual professor, he sometimes does himself a disservice, since the placement office usually knows *all* the candidates who might qualify for a particular job, while the professor will know only a few.

WINDROW: There is the occasional recruiter who feels he must work with his peers—the dean or the president. They are usually the very last people you should want to see on a recruiting mission. For the best results, come to the placement bureau. For special situations, individual professors might be the best. But if you want to guarantee your own failure, go to the man at the top who is working on other important matters. He's least likely to be able to help you.

Q. Where should a recruiter plan to interview candidates? At his hotel? On the campus?

WINDROW: We try to provide office space on the campus. Remember, these students don't have a great deal of time. They can't get down to the center of town for a 15-minute interview. Sometimes an interviewer will ask the candidate to meet him off the campus, but this is usually a candidate for an administrative position—not a prospective beginning teacher.

Q *How should the interview be conducted? Is it better to meet with individual students or with a group of those interested in a particular position?*

KERN: If the recruiter is coming from a system with several openings, a group meeting might be profitable. It gives the interviewer a chance to present the whole picture—to describe the philosophy of the district, to talk about the community, the problems and the advantages. But I think the students would also like an opportunity to talk to the interviewer privately about specific openings.

Q. Do you limit interviews to just 15 minutes apiece?

KERN: That will depend to an extent on the position that is open, on the interviewer and the candidate.

WINDROW: We generally find that 15 minutes is sufficient. Some interviews last a little longer. It is determined to a large extent by the skill of the interviewer.

Q. An interviewer has 15 minutes to spend with a candidate—to learn whether he wants the job and whether he would be any good in it. How should he use this time?

WINDROW: He should probably do as little talking as possible. It depends, again, on the skill of the individual interviewer. Some end up doing all the talking—and if

ARE YOU PUTTING YOUR DISTRICT'S BEST FOOT FORWARD?

Why should a teacher choose to work in your district? If you are presenting the wrong reasons, you may not be getting the teachers you deserve. Here is how Miss Peggy Kern, the acting placement officer at George Peabody College (herself a top teacher candidate) rates the eight "advantages" most often stressed by recruiters.

Salary

"This is less important to most prospective teachers than many districts think. Opportunity to earn a good salary eventually is important, but most graduates have only themselves to support right now. They aren't as concerned about salary as teachers with families. Other considerations often outweigh a low starting salary."

Opportunity for advancement

"Many recruiters are very vague on this point or fail to discuss it. But it's a strong point in their favor if a teacher can look ahead five or 10 years and feel that he has a chance to advance within the district."

Security

"Beyond the year for which a contract is signed, this would not be important at all. A prospective teacher wants to know that he won't be out of a job in the middle of the year, but he doesn't expect any more than

the candidate is a good listener he may get hired. If I were doing the recruiting, I would probably try to work up a two- or three-minute presentation in which I described my school system, told about the opening and added any other pertinent data, such as salary, opportunities for advancement and cultural advantages. I would want to get the candidate to do most of the talking. And, I would want to be completely prepared to answer any questions he might raise. Remember, with the teacher shortage, the best candidates are interviewing the recruiter to see if they *want* to work in that district. It is no longer a one-way process in which the recruiter does all the rejecting and accepting.

Q *What should a recruiter be looking for when he is interviewing a candidate?*

KERN: We do some of the screening and selecting for him in advance. That is, if he's looking for an English teacher, we have him interview only those candidates who are qualified to hold that job. And he has access to the student's transcript so that he can see how well qualified he is.

WINDROW: That's correct. So the recruiter is really interviewing the person more to find out about personal traits—how he looks, whether he is a good learner, whether he is ambitious, is articulate, is lazy. And, of course, he wants to know if he can impart what he knows about a particular subject. Hiring a person is a gamble—you never know how it is going to work out until the person starts on the job. But by asking the proper questions, you can cut down on the possibility of error.

Q. Will the placement bureau help a superintendent make a decision on one or another candidate?

WINDROW: A placement bureau has an absolute obligation to be honest at all times in dealing with a recruiter. He is given all the facts that are available which might indicate that a candidate would or would not succeed in a given situation. If a recruiter is lucky, about 80% of his employment decisions will be good ones. We try to give him all the facts he will need to make good decisions.

Q *Who should do the interviewing for a district? Is there an advantage in sending the superintendent to do the job, or can other members of the school system handle it?*

WINDROW: A good many superintendents, assistant superintendents and principals come through to do their own recruiting, but many of the better systems are now sending guidance people or other professional interviewers. It really does not matter so long as the person represents his district fairly. He should know what he wants, be tactful and well-poised and, above all, he should have the authority either to hire the man on the spot or to tell him that he has the job and that the contract itself is just a formality. **End**

"If you don't want to interview the best candidates for your job, go see the college president. He's the last person able to help you."

WINDROW

that. He might not like the district—or the district might not like him. Security is not a compelling reason to go to one district rather than another."

Cultural and educational opportunities

"This is a very important consideration for new teachers. These people are just out of college, and they're interested in what's going on around them. Many of them want to further their education so a college or university in the area would be very important. So would a real in-service training program. And, of course, theatres, concerts, museums and other cultural outlets are very attractive to young teachers."

District size

"It certainly isn't a compelling reason for joining one district or another. If a candidate were offered a position in the field he wanted, at the grade level he preferred, the size of the district wouldn't be important at all. A more decisive factor would be the size of the class he was to teach."

Facilities

"Prospective teachers want to know what facilities they'll have, how large the rooms are, what materials they'll have to use, even the kind of furniture in use in the district. Certainly a district with a clean new plant has a better chance of attracting teachers than one with dingy old buildings. But, this would be a secondary consideration. Other factors are more important."

Curriculum

"These prospective teachers are being exposed to a number of new ideas in education. If a district is trying some of these ideas out—if it's willing to experiment—it stands a much better chance of attracting top teacher candidates. This is one of the first things a prospective teacher wants to know about a district. The recruiter who can't show that his district is interested in new ideas and programs is at a serious disadvantage when it comes to signing up teachers."

Location

"This is important to some students, less important to others. Sometimes, for personal or other reasons, a teacher wants to live in a particular section of the country, but most of our graduates are looking at the schools first, the surrounding area second and the general location hardly at all."

How television can train your teachers

In San José, Calif., school districts are cooperating with a college to produce in-service training telecasts for their faculties. The programs are helpful for the teachers, inexpensive for the schools, and convenient for everybody. Here's how they work.

■ ■ ■ Remember the teacher of yesteryear? Her basic education was enough to carry her through 30 or 40 years of teaching.

Times have changed, haven't they? Today's teacher has to be "re-educated" several times during her career because curriculums and instructional techniques are changing. Whole new bodies of material, new concepts of instruction, must be mastered.

Yet, in many school districts, a teacher's in-service training is dismissed with a shrug and a wave of the hand. It's too time consuming; there's a lack of supervisory personnel; in many cases, even if a district wants to get up an in-service program, it cannot get the funds to do the job completely.

In San José, Calif., school officials believe that educational television may be the answer to all these problems. There, 21 districts

Teleteacher demonstrates use of lettering device before audience of classroom teachers in 21 districts. This program was one of series on preparation and use of class materials.

in six nearby counties have cooperated in producing teacher-oriented telecasts over an open circuit TV channel. The Instructional Television Center of San José State College produces and directs the telecasts and a commercial TV station, KNTV, donates its facilities and air time as a public service.

Results: A better in-service training program than any of the 21 districts could produce alone and, of course, all the benefits that go with informed and well-trained teachers.

How they work together

About two years ago, representatives of 21 districts near San José began meeting with personnel from the college's Instructional Television Center to determine how television could be used to improve in-service training. (The college already had ETV for its own students.) None of the 21 districts had the illusion that ETV would solve their teacher training problems. Most were just looking for help. Some districts had no teacher training program at all. Some had in-service training that needed improvement. Some were just curious.

After a series of meetings, ETV looked so promising that a permanent television coordinating council was formed—originally to experiment with television, later to take charge. The council consists of television coordinators from each district and representatives of the six county offices of education and the college. This group became the organization determining the "how, when, and what" of a televised program. It also publishes time and program schedules for distribution to the districts.

Its most important job is defining the content of a telecast. Obviously, not every program will appeal to every teacher in every district. But the district television coordinators do know the kind of help their teachers need. If several districts request in-service

Geography professor presents special telecast to elementary teachers. Program subjects are determined by television coordinating council, which also prints and distributes study guides for teachers.

Science teachers learned, through televised programs, how they could make their own demonstration models for astronomy. Tips for conducting experiments and demonstrations were included in study guides.

training in a similar area, the college is asked to prepare a presentation on that subject. Once a program topic has been agreed upon, planning is begun with an expert who will probably teach the lesson himself.

For example, California recently instituted a state-wide testing program for students. Hundreds of teachers in the San José area were unfamiliar with the new procedures, so a television program was produced explaining them. A second telecast taught teachers how to administer the tests in their own classrooms. Both of these programs were taught by a college testing specialist.

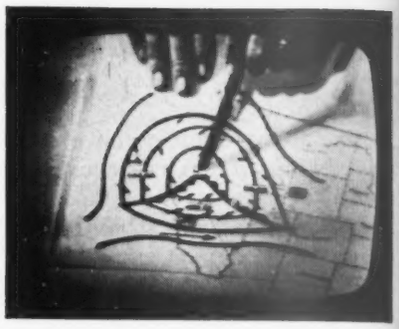
Most of the television teachers are instructors at the college. The "teleteachers" prepare the 30-minute programs just as they would their own class lectures or demonstrations, but they take one important extra step.

Study guide for teachers

While he is preparing his TV lesson, an instructor also makes a study guide for his viewers. In this booklet he explains material which would take too much time on the air. He lists references where classroom teachers can find additional information; he gives tips for making study aids and conducting experiments shown on the air; he gives suggestions for improving the presentation of material to students. After he writes the study guide, the coordinating council publishes it and distributes it to the 21 school districts. They, in turn, distribute it to schools and teachers who will have it available during the telecast.

"These guides are important," says Robert M. Diamond, the production supervisor at the college's Instructional Television Center. "Teachers say they're just as valuable as the actual telecasts, and I'm sure either would suffer without the other."

According to Diamond, the telecasts are presented to the teachers in the same way a teacher would present the material to her students. "That's so the teachers can learn *how* to teach, rather than just acquiring additional knowledge in the subject." Each program is independent and self-contained, although a series is often presented on one topic. Telecasts are shown once a week during the school year, usually on week-end mornings, the only time when the television station can make the time available regularly.



Kinescope recordings (16 mm sound films) are made of every telecast. They are routed to districts for review or when teachers missed original programs.

When time is available around four o'clock on weekday afternoons, programs are shown then instead. On these occasions, groups of teachers, or even the entire faculty of a school, can watch together. Afterwards, the teachers conduct workshops using the study guides as outlines.

Watching the telecasts is not mandated for the teachers because all the telecasts are not pertinent to all the districts, all the schools, or all the teachers. "This is the only disadvantage," says Diamond. "Only a small percentage of our telecasts have interest for everyone."

Because many teachers miss the telecasts and not enough time is available for repeats, KNTV prepares kinescopes of the training programs. These are regular 16mm sound films which can be routed to a district by the coordinating council whenever requested. They are free for this purpose, but copies of the films can be purchased by the 21 participating districts for about $90. Diamond reports that the films have been valuable for orientation of new teachers, curriculum study groups and review.*

* *Copies of the kinescopes are available for rent, and the study guides for purchase, through the Santa Clara County Office of Education. Write Dr. Myron H. Schussman, 70 West Rosa St., San José 10.*

Advantages of television

After almost two years of receiving the telecasts, schoolmen in the 21 districts believe there's strong evidence for using educational television as an aid for teacher training. Here are their arguments:

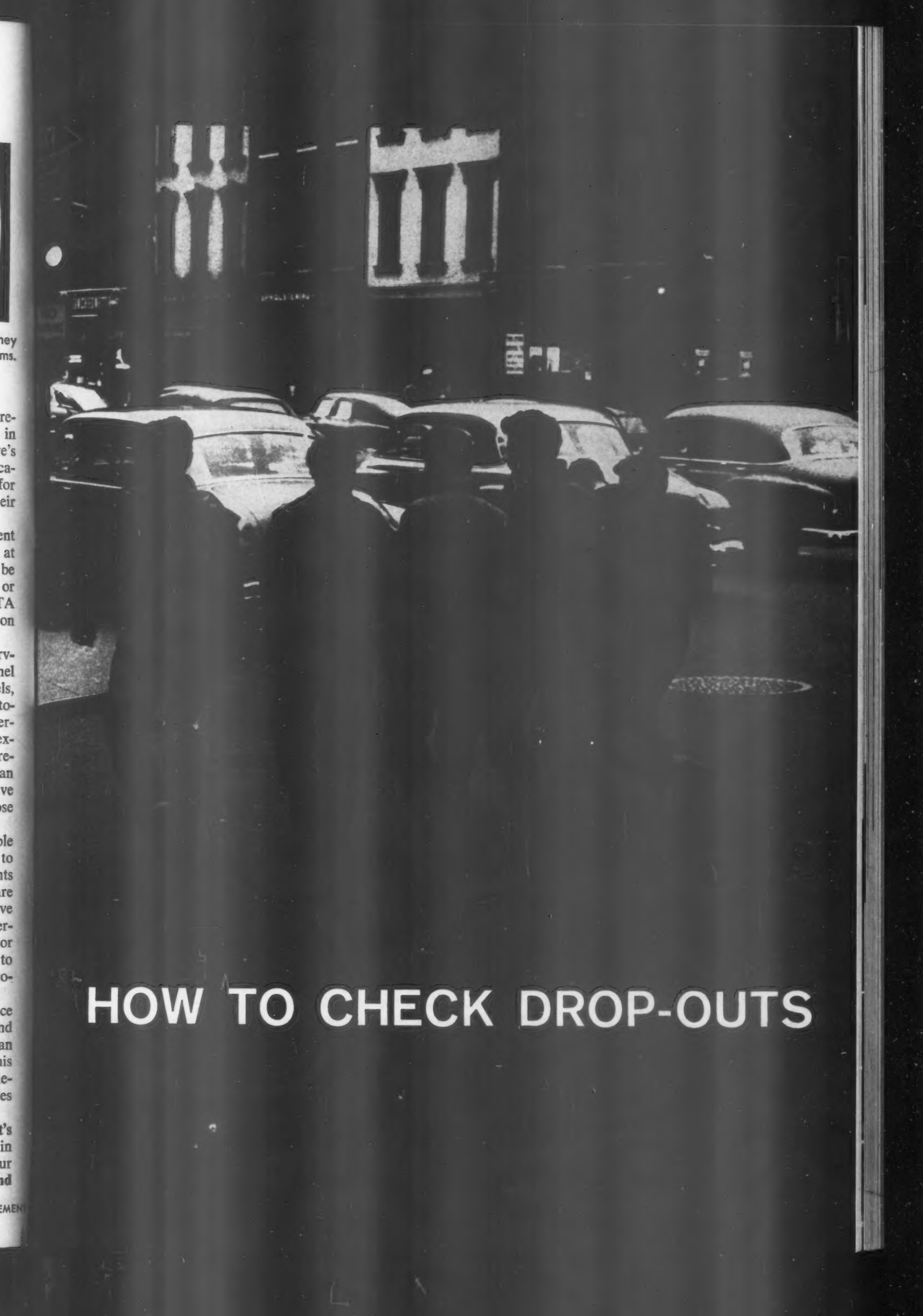
1. Television is a convenient way of reaching many teachers at the same time. Programs can be viewed at any time of the day or evening, in a classroom, a PTA meeting, or home, "live" or on film.

2. All the resources of in-service training, including personnel and teaching aids (films, models, experiments) can be brought together into a concentrated, interesting presentation. No better example of cooperatively using resources can be found than in San José, where the 21 districts have pooled their resources with those of higher education.

3. Television makes it possible for every teacher to have access to curriculum specialists, consultants and resource persons. These are the very people who never have the time to render extensive personal service to individuals or groups, but who do have time to develop a half-hour television program.

4. Television for in-service training is not expensive. Diamond estimates the cost to be less than $10 per teacher per year, and this includes the production of kinescope recordings and study guides for each telecast.

5. Teachers like the idea. It's convenient. Said one teacher in San José: "It's the fastest half-hour on TV." **End**



HOW TO CHECK DROP-OUTS

Six case histories

HOW TO CHECK DROP-OUTS

The problem of drop-outs has become the conversation piece of the fall season, but relatively few districts are doing anything about it. Here's a report on schools that have started taking action.

By ANITA VOGEL
School Board Member
Bridgeport, Conn.

About the author: Mrs. Vogel, for eight years a member of the Bridgeport, Conn. board of education, became concerned about the drop-out problem as it affected her immediate district.

In her search for solutions to Bridgeport's problems, Mrs. Vogel attended several national meetings on the problem and corresponded with the directors of programs that seemed most promising to her.

In this article, Mrs. Vogel reports on the scope and source of the drop-out problem and describes the practical programs that she, as a school board member, feels could most easily and practically be adopted by other districts across the nation.

■ ■ ■ One-third of our nation's youth is entering the adult world without the benefit of a high school diploma. In some areas (Chicago, for example), more than half of the student body drops out before it completes high school.

It is almost impossible for these teenagers to find decent jobs. Today's typical employer demands a high school diploma before considering a job applicant. His reasoning: the youth who failed to finish high school is a poor risk for job success.

Over the next decade, the drop-out's plight will be far worse. An estimated 26 million young workers will be entering the labor market in an era of diminishing demand for unskilled hands. By 1965, there will be three unskilled workers for every two jobs they can fill, while seven skilled jobs will be open for every five who are qualified. Unless there is a drastic change in the drop-out pattern, 7.5 million young adults will be candidates for chronic unemployment.

Spotting the signs

Spotting the potential drop-out is not difficult for a trained guidance person. But finding the cause —and correcting it—is apt to be more difficult. There have been extensive studies of the reasons why students become early school-leavers. The major factors are these:

1. Academic difficulties

A grade retardation of at least two years, particularly in reading and arithmetic skills, and a pattern of academic failure are frequently found among drop-outs.

While the average IQ of drop-outs is lower than the average for graduates, motivation rather than IQ is the more significant lack. The majority of drop-outs have an IQ of 90 or over, indicating their capability of coping with high school work; about 10% test at IQ 110 or over.

2. Home environment

Where parents and relatives place no value on education, there is pressure on the student to "quit wasting time at school" and find a job. Family tensions characteristic of the broken home often cause emotional difficulties that lead to failure at school. The family's economics may make a job imperative, may also cause withdrawal because the student feels he can-

not "keep up" with his (or more often her) peers.

3. Lack of interest in school

Whether cause or effect, loneliness and isolation contribute to the pattern of failure. A large proportion of drop-outs are members of minority groups. Some feel "not accepted" by teachers and fellow students, hope to find acceptance in the world of work. Others decide that high school will get them nowhere because opportunities which a diploma might bring are closed to members of their group.

4. Attendance problems

Children of transient families, who transfer from school to school, find adjustment to the new school increasingly difficult. The feeling of hopelessness which results may add them to the list of drop-outs. Ill health which keeps a youngster out of school may discourage him to the point of withdrawal. Truancy is a symptom of other problems, but it compounds them, as frequent absences add to academic difficulties.

5. Early marriages

Unlike the other causes cited, early marriage is more often than not a rural and small-town problem. Frequently a boy has graduated and gone to work or into the armed services and his girl friend leaves school to join him. Pregnancy leading to marriage is another cause of drop-outs.

Is the drop-out the school's responsibility? The answer must be "Yes." A measure of every school system's success is the percentage of useful, productive adults it graduates. Clearly, the school alone cannot cope with all the social, economic and emotional ills that may underlie pupil failure. Communities are coming to recognize, however, that the school is the logical focal point for identifying students with problems. And schools often can apply techniques to reverse the pattern of failure, or, where problems stem from non-school sources, other community agencies can be called in to help solve them.

What can be done about drop-outs? The most obvious step is to try to persuade the youngster that he will be better off finishing school. Once he has reached the decision to quit, it is not easy to change his mind.

Canton, Ohio, tries to reach the student with a booklet dramatically entitled, "The teenager who lost a million—this could be you . . ." It reproduces letters from a cross-section of the community's leaders, including employers, labor leaders, police and armed services recruiting officers. All stress reasons for completing high school; many state flatly that only high school graduates are eligible for their jobs or training programs. Not only is the booklet used in counseling the drop-out; the potential drop-out is well exposed to its contents in his English classes, where it becomes a text for a letter-writing course. (*For more on the Canton Plan, see page 77.*)

For the youngster who has made up his mind to quit, a number of schools have found that *helping* him to get a suitable job may be the best way to bring him back to school.

Passaic, N.J., started a cooperative program in 1948 involving schools, the local office of the state employment service, and community agencies. Drop-outs were referred directly to the city psychological testing service for a variety of aptitude and interest tests, then sent to the employment service for counseling before placement. An interpretation of test results was sent to the employment service.

Many drop-outs—especially 16-year-olds—who were found to be personally and socially maladjusted were encouraged to join a Co-Ed Club sponsored by the YWCA, where they were helped by a supervised program of wholesome activities. Cooperating agencies contacted employers, pointing out the community approach to the drop-out problem and stressing the availability of a valuable source of carefully screened labor.

After five years of this program, Passaic found that one-third of its young people had reconsidered and decided to remain in day classes. Another third was enabled to transfer their credits to night high school, where they continued their studies while working during the day. Suitable jobs were found for nearly all the remaining third.

Youngstown, Ohio; Tampa, Fla.; Hartford, Conn.—a long list could be compiled of communities where the school system and the state employment service have

worked out similar programs of cooperation. The school systems systematically refer drop-outs for preemployment counseling and work closely with the employment service, making school guidance and test records available.

The United States Department of Labor is currently encouraging state services to expand their youth counseling, so that effective cooperation should be possible in many more communities.

The Detroit Job Upgrading Program offers help after drop-outs spend at least 30 days unsuccessfully trying to find a job. These youngsters already know how seriously they are hampered by their youth and lack of skills.

Detroit's flexible, voluntary program is sponsored jointly by the community and the public schools. Young people are referred by community agencies, individuals or the schools. They join groups that meet mornings in the schools, led by a counselor, to learn such basic techniques as: how to dress neatly; how to get along with others; how to apply for a job and fill out an application; how to hold a job. The counselor helps them discover interests and aptitudes and gives sympathetic help with personality problems. They spend afternoons job hunting.

Those who do not find jobs on their own within a few weeks are placed in six-weeks' subsidized work experience in a social agency or city department. Job supervisor and counselor work closely to teach good work habits and attitudes.

The counselor's afternoons are spent making calls to employers, so that he can continue to guide the youngsters through their first six months of private employment.

The length of time each individual spends in the Job Upgrading Program varies according to his needs. Results in a typical year for those who stayed with the program more than 10 days: 41% are on jobs; 29% are in the process of upgrading; 26% left voluntarily or for reasons beyond their control; 4% returned to regular school.

Must the youngster with a history of academic difficulties become a drop-out? Or can the school give at least a sense of responsibility toward a job, self respect, and the ability to communicate with others, which every good citizen needs?

Lincoln, Neb., has developed a work-school program to deal with potential drop-outs, including many with quite a low IQ. Serving on the school staff is a coordinator of the special employment program, who confers with such students, consults their principal, homeroom teachers, and their parents. She counsels youth from age 13 up; with parents' consent she helps to secure jobs for those 14 years and older.

The youth is helped with the employment application and interview; his physical appearance is checked for cleanliness and neatness. Arrangements are made for a work permit. Contact is maintained with the employer and the youth to check his progress.

Of the 48 cases handled in one year, 32 remained in school and worked part-time; 10 dropped out, with or without full employment; three stayed in school full-time; and the others attended night school with full- or part-time jobs.

To quote from a report of the Lincoln coordinator, "The right type of employer can be very effective in the adjustment of a pupil. If the counselor effectively coordinates the work of the employer, school and home, we may create a very influential school picture."

New York City's schools have enlisted the help of the municipal government in their campaign against drop-outs. Under a program instituted this fall, civil service jobs for which there is a lack of qualified applicants are thrown open to high school students.

These jobs are filled on a part-time basis by students selected because they are potential drop-outs and because they come from low income areas. The students must, however, have some skill in the jobs they are to fill.

By providing these job opportunities, the city hopes to eliminate the economic need for students to leave school, and also to provide these students with an incentive to remain in school long enough to earn a diploma, a requirement for most permanent civil service appointments. (*For more on New York City's plan, see page 80*).

Can the schools take steps much earlier to prevent pupil failure?

The above local skirmishes with drop-outs represent but a small sampling of work done in the nation's school systems. Of late, national focus has been turned on the problem, sparked by the paradox of worker surplus and skilled labor shortage, plus a drop-out problem in urban centers of such critical proportions that it has brought out the big guns of educational research. This research, probing deeply into the causes of school failure, will be valid far beyond the boundaries of the great cities where it is taking place.

The Ford Foundation is sponsoring a major onslaught on the drop-out problem in cooperation with the school systems of nine major cities: Chicago, Cleveland, Detroit, Milwaukee, Pittsburgh, St. Louis, Buffalo, San Francisco and Washington. The Great Cities School Improvement Program is primarily concerned with the education of the culturally deprived pupils in the depressed areas of these urban centers.

The plight of urban schools has been compounded by the fact that less money has been spent over the years per pupil in large cities than in the "steady" schools of areas economically better off. Those involved in the Great Cities Program recognize that raising the educational level of the culturally deprived is a costly process, requiring not less but more money than schooling in stabler areas.

All of the Great Cities Programs receive grants from the Ford Foundation for a limited number

for any community."

of years. Each year the city's share of the cost will increase until it carries the entire program. Cities must indicate their willingness to assume this responsibility. Thus, economical use of staff and materials is important to the progress of the program.

Great Cities Programs are trying a variety of approaches to these goals: St. Louis is experimenting with a work-study program. A number of cities are using remedial and enrichment classes; some have orientation programs for new arrivals; all are attempting to improve teaching and to involve the community.

Washington, D.C., is working to help very young children who have severe language difficulties. A skilled language teacher is assigned to each of seven schools to work with teachers, pupils and parents.

Noteworthy in the program are summer junior primary classes for children who need special help with reading. Tests last spring indicated that a group of youngsters was not ready for first-grade work but that extra work in the summer might bridge the gap for them. They were helped in eight junior primary classes, Washington's first experience with summer sessions for youngsters below third grade.

Another Ford Foundation grant will provide more immediate help for schools interested in tackling the drop-out problem. With the aid of $190,000 of Ford funds, the National Education Association has placed Dr. Daniel Schreiber in charge of a national clearing house in Washington for information on drop-outs and efforts to cope with them.

Help with community planning for drop-outs may also be had from the National Committee on Employment of Youth, 419 Park Avenue South, New York, 16.

One thing is certain: anything that improves the schools cuts the drop-out rate. And any program that makes more young citizens self-supporting is a sound investment for any community.

TAPED TELEPHONE TALK **...TAPED TELEPHONE TALK**

For a more detailed description of how two cities are tackling the problem of drop-outs, a School Management editor placed phone calls to Canton, Ohio and New York City.

Although both Canton and New York are large school districts, many of the solutions and programs they have worked out could be put into effect in any district where drop-outs are a major—or minor—problem.

Speaking for the Canton schools was Mr. Lloyd Swan, director of pupil guidance for the 22,000-student district. In New York, several agencies are cooperating with the schools in tackling the drop-out problem. One of the most active is the Manpower Utilization Council, headed by Dr. Theodore Lang.

Both telephone interviews were tape-recorded.

Early recognition of potential drop-outs helps Canton

Q. Mr. Swan, what is being done to check drop-outs in the Canton schools?

SWAN: Our work is based on a rather complete guidance program that starts in the elementary schools just as soon as the student shows signs of scholastic difficulties.

Q. What is done on the elementary school level to combat potential drop-outs?

SWAN: These people do two things. First, when they spot children who are having difficulty in school, they work with them—and particularly with their parents—to try to find and correct their problems. Second, they help the high school guidance people by pinpointing the children with problems and by furnishing as complete information as possible on the source of their troubles. This gives our high school counselors a head start with these students.

Q. How do they make use of this early information?

SWAN: Every child who is considered a potential drop-out when he enters high school is visited by a guidance counselor during his first two or three days in the school. The purpose of this visit is simply to tell the child that there is a person in that new school who is aware that he is there and that he is ready and willing to help in any way that he can.

Q. How do you identify a potential drop-out in the Canton schools?

SWAN: We have identified 12 earmarks of the drop-out (see box, page 79). In our experience, a student who has a pattern of four of them is a potential drop-out. At the elementary grade level, our counselors are looking for the child who is a low achiever, is moving frequently, showing little interest in school and whose parents show little concern.

Q. How about IQ? Does that help identify a drop-out?

SWAN: I was very much surprised to find that IQ scores were not as low as I had supposed. They were frequently in the 90-100 range,

with a few between 80 and 90. There were also a few in the 100-110 bracket.

Q. In other words, it was motivation rather than intelligence?

SWAN: That's right. Motivation and low achievement. Since most children in the 90-110 bracket remain and finish high school, I can see little possibility of this score serving to separate the drop-outs from the child who finishes school.

Q. Let's say that you identify a student who appears to you to be a potential drop-out. What happens next?

SWAN: If it's a reading problem, then referral is made to the reading-helping teacher. That has helped many of them. Next, the counselor is there, and if the child finds there is somebody who listens, somebody he can talk to, it certainly helps. He doesn't feel quite as alone facing up to his daily frustration.

Q. So that in the elementary school your main concern is with giving a child a sense of security. Is that correct?

SWAN: Yes. At this point the student could not drop out even if he wished to. But by laying a groundwork of security, we are trying to eliminate the causes of potential drop-out in the high school.

Q. At what age can a student drop out at the Canton schools?

SWAN: A student who is 16 years or older and who has a job can leave the Canton schools. If he does not have a job, he cannot drop out.

Q. A ruling like this simplifies your job somewhat, doesn't it?

SWAN: Yes it does, but we find a number of students who take a job long enough to get their working papers and then become unemployed.

Q. Do you make an attempt to place students in jobs once they have decided to drop out from your schools?

SWAN: No. Our major effort is to hold the boy in school. Frankly, the job a drop-out can get is no job at all. Supermarkets will not hire boys unless they are good students or they are graduates. They don't want drop-outs. They can shine shoes, set pins in bowling alleys, wash cars. Those are the kinds of jobs they can get. They are not worth anything to an employer and frankly we do not want to get involved in placing these youngsters in that sort of work.

Q. Factory jobs are not available to these students?

SWAN: No. They must be 18 years old. A drop-out cannot operate an elevator; cannot work on a truck. He can't be on a scaffolding. He cannot operate power driven machinery. He can put stocks in a grocery store, but grocers have come to the conclusion that it does not pay to hire drop-outs. They want a boy who is doing good work in school. One of the bigger supermarkets in town has a testing program. When a boy starts to work for them, he has to pass their tests. Every six weeks they check his report card. If his grades fall below 85, he loses his job.

Q. Is this something you worked out with employers in order to wage your fight on drop-outs?

SWAN: No, they worked it out themselves. The employers have found that it pays. They don't want drop-outs and we're very happy that they feel that way.

Q. Since your primary interest is in keeping students in school, what do you do when a student comes to you and says that he wants to drop out?

SWAN: In the first place, we hope to prevent the student from ever coming to that point. We do this through all the guidance services we've mentioned earlier. But if a student does come to me and says that he definitely wants to drop out, then we make a last ditch attempt to keep him in school. To help us with this task, we have compiled a little booklet, called "The teenager who lost a million —this could be you." This booklet is simply a collection of letters sent to me by various potential employers in this area telling their attitude towards employing students who failed to complete high school. This booklet, by the way, is used in our English classes to illustrate the technique of letter writing. So students are exposed to it in this way too. I will take this book and say to the student who wants to drop out, "I know you have seen this, but have you read it?" I try to explain to him the kind of decision that he is making and I ask him to take the book home, to read it, and to think

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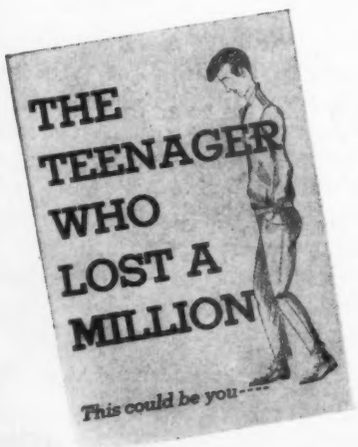
THE ATTITUDE TOWARD DROP-OUTS . . .

This booklet, a collection of letters on personnel policies of business firms in the area, is shown to potential drop-outs. Here's what the borderline students read:



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". . . except for some specialized jobs requiring special education, a person must be a high school graduate or we give him little consideration."
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". . . no matter how well a young man appears, or how well he talks, or how ambitious he may be, we will not employ him unless he is a high school graduate."
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about his decision. If the boy wants to come back to me the next morning and ask for his working papers, I will give them to him with no argument. But I want him to spend at least 24 hours thinking about what he is doing.

Q. How successful has this program been?

SWAN: We started making use of this booklet last spring. We asked the students to take the book home, to go to their rooms and not go out with the boys for that night. We asked them to really think about it, to read it and study it. Last spring alone, we had more than a dozen students who came to me looking for their working papers, who took the book home and returned to their classes the next day.

Q. Do you find these students succeeding in school after that experience?

SWAN: They are really buckling down. They have the ability to do schoolwork and now they have the motivation to do it too.

Q. You say they have the ability. Do you make an attempt to keep every student in school?

SWAN: As far as we can, we do. But if this youngster has a very low IQ, if he is struggling alone and has reached the end of the line, we let him go.

Q. What happens to the students who decide not to drop out—to stay in school?

SWAN: When a student comes to me to talk about dropping out, I will call his guidance counselor, tell the counsellor the student has been in to see me and that I have sent him home to think over his decision. If the student returns to school, the counselor will meet with him the very next day. They will work out certain things. The counselor will say, "Let's try this for the rest of the week and see how you make out. Then come back on Friday afternoon and let's pick it up from there." They will have frequent contacts from then on. They will meet every day or every other day. Later it may be once a week. There is no standard format. We think of each one as an individual situation where we have gotten a foot in the door and where the counselor must do ev-

HOW TO IDENTIFY A POTENTIAL DROP-OUT

In studying Canton's drop-outs, Mr. Lloyd Swan noted 11 recurring problems. In his experience, any student to whom any four of these apply must be considered a potential high school drop-out. These are the signs of a drop-out:

1. Seventh-grade achievement a year or more below grade level in arithmetic and reading. The student is not keeping up academically.

2. Attendance at several elementary schools. The student cannot develop a sense of belonging to any one.

3. A newcomer to Canton (or any city). The student has come from a rural area or a smaller town and feels lost in the big city.

4. Failure in one or more years of elementary or high school. Most frequently the failures occur in the first, second, eighth and ninth grades.

5. Low economic level. Generally accompanied by a lack of parental emphasis on education.

6. A broken home.

7. An irregular attendance pattern in high school. Usually this is accompanied by low grades.

8. Difficulty in adjusting to the high school. The student does not take part in school affairs.

9. Community problems. A youth who has been in difficulty with the police or other community agencies.

10. Among girls, going steady with older boys. The boy leaves school for the service or a job and the girl no longer fits in.

11. Among boys, ownership of his own car. He must drop out to earn money to support his vehicle.

erything he can to make sure that the door does not get closed.

Q. Do you make use of the teachers at this point?

SWAN: Sometimes it will be a particular teacher who can be extremely helpful in an individual case. More often, the counselor might work directly with the student's teachers. He may go to a teacher with whom the student is having some trouble and tell the teacher that he is working directly with this youngster. He may ask the teacher's advice as to how he can help the youngster, what the youngster needs to do to improve himself. Then the counselor will go back to the student and try to help him to adjust to the situation.

Q. How about the parents? Do you work with them at all?

SWAN: When a child wants to leave school, the parent must come to this office to sign the papers. At that time, we talk it through. If the parent will support us, it is very helpful. If we can get a parent to adopt an authoritarian attitude and say, "You're not going to quit," that helps. But actually, at this point it's much too late to try to reach the parent. He should have been reached 10 years earlier.

Q. How long have you had an active program to counteract drop-outs?

SWAN: I would say that we have been making an intensive effort for the last four or five years.

Q. Have those efforts borne fruit from what you can see?

SWAN: I would say they have. We are retaining from 8 to 10% more students then we had previously. And, as our techniques improve, our retention should improve too. You know, a student who wants to drop out usually is not making a snap decision. He has been heading in that direction for a long time and no crash program is going to be very effective in changing his mind. To effectively counteract drop-outs, schools must develop programs starting in the elementary grades that will give them an opportunity to identify the difficult students, to work with their parents and to help them see from the start what it means if they fail high school.

TAPED TELEPHONE TALK **...TAPED TELEPHONE TALK**

Municipal cooperation helps New York's campaign

Q. Dr. Lang, what is being done to check drop-outs in the New York schools?

LANG: A great variety of approaches to this problem are being tried in the city's schools. Many of them are under the direction of the Manpower Utilization Council, of which I am the chairman. This, however, is a non-school agency. The board of education is a member of the council but we feel that the problem of school drop-outs is a city-wide problem, not one with which the schools should be forced to deal alone.

Q. What are the programs being carried out under the council's direction?

LANG: We are using a two-part approach. The first, which we call our "talk-it-up" campaign, was carried out primarily during the summer months. This was a public relations job designed to help students understand the importance of completing high school. The second phase of our work—making it easier for students to remain in school—is underway now.

Q. Suppose we take them one at a time. How did your "talk-it-up" campaign operate? What was involved?

LANG: That program was carried out in depth over a period of about six weeks. We made use of radio, television, newspapers, direct mailings in the community from religious organizations, business groups and unions, and any other media that were available to us.

Q. When you say direct mailings, how were these handled?

LANG: We obtained about 50,000 comic books from the department of labor *(see illustration, pg. 82)*. These stressed the need for a student to complete his high school education. We sent copies of these to businesses and institutions in the city, offering to send them as many as they would be able to profitably use. Orders began to come in for 100 books, for 200, for 1,000. We sent the books out to these organizations and they used them in direct mailings to their members.

Q. In other words, there was no attempt to pinpoint potential drop-outs with these mailings? They were sent out broadside?

LANG: That's correct. We were simply sending this out as general information to all students and their parents.

Q. What was the emphasis of this literature?

LANG: The emphasis was that you're a dumb bunny if you drop out of school. You're ruining your life. There's nothing you could do better with the year or so left in school than to go to school. It's worth a lot of money to you. And it's worth a lot of money to your career. It's worth a lot to your social status in the community—to your family life, and so on. The facts are there.

Q. This was pretty much a factual presentation?

LANG: This one piece of literature was, but we made use of many different appeals. We used emotional appeals from various authorities. We might use a statement from the mayor but we also use appeals from teenage idols such as movie and recording stars or sport champions.

Q. What other ways were used to disseminate this kind of material?

LANG: We circularized all the religious and other civic leaders in the community and we provided

Signs on city buses and subways, telephone poles and lamps, emphasized material reason for staying in school.

them with material for sermons and speeches and encouraged them to use it.

Q. Did you have any results?

LANG: Yes, we got back a number of letters from both the ministers and from members of their congregations. You know, this is an issue which sparks the imagination of everybody in the community. They all see the importance of it and everybody is willing to give this a push. We had no difficulty in getting cooperation.

Q. Was this an expensive program to put into effect?

LANG: So far as we were concerned it was inexpensive. The entire city of New York had out-of-pocket expenses of less than $9,000, for a six-week campaign to keep students in school. But the value of the program in terms of radio and television time, talent, speeches, newspapers, magazine and outdoor advertising space was close to $1 million. A great deal of time and money was spent but it was spent voluntarily, by different persons and different groups.

Q. Was there anything else done during this period to dramatize the problem of drop-outs?

LANG: Yes. We felt that it was necessary to do more than just discourage drop-outs. We thought it was necessary also to positively sell staying in school. A large part of our campaign was devoted to the advantages of schools, as well as the disadvantages of dropping out. Our stay-in-school campaign was focused around a "spectacular" co-sponsored by this organization and one of the local radio stations.

Q. What do you mean by a "spectacular"?

LANG: This radio station—WABC—undertook to bring about 20 of the most popular teenage entertainment stars to New York. For a period of about a month they advertised the spectacular over the radio, using disk jockeys to help play it up. You could not buy a ticket to this show. Tickets were available only if the student sent in a pledge promising to return to school this fall. The station's slogan was "play it cool—stay in school—send a pledge in to WABC—you'll get your ticket to the spectacular."

Q. How successful was this?

LANG: It was so successful the station stopped distributing tickets after a couple of weeks because they had room for only 3,500 spectators at the show and they received more than 15,000 pledges.

Q. Were these all from students who were potential drop-outs?

LANG: No. We're sure that many of the people who sent in the pledges would have stayed in school anyway. But the spectacular was a peg around which this station—which is very popular with teenagers—was able to play on the stay-in-school campaign for over a month.

Q. Let's move on to the second phase of your program—making it easier for students to stay in school. How is this being carried out?

LANG: This is still an experimental pilot program but we think it has great potentialities for the future. Most schools are familiar with the co-op education program. Under it, students work part-time and go to school part-time. In this city, students usually work a week and go to school a week. Employment is provided by private firms in the city.

Our departure has been to extend this program to the municipal government. Our own city has

set aside for this year 138 jobs. Each job is available for two young men or young women. That means that 276 youngsters can be involved in this program the first year.

Q. So the difference between your program and the ordinary one is that the government is supplying the job, rather than private industry?

LANG: That's just one part of it. Students who are going to work in these jobs are selected from low income neighborhoods in the city. They are students whom we consider potential drop-outs. And, they must have some skill in the work to which they are assigned.

Q. What kinds of jobs are involved in this program?

LANG: All of these jobs are in areas where there is a lack of qualified applicants for full-time employment. We have openings as dietary aides, laboratory aides, nurses aides, stenographers, typists, office appliance operators, key punch operators and mail clerks in various departments.

Q. Are these students paid?

LANG: Yes, they are paid at a rate of about $2,750 per year, something over $50 per work week. This is approximately the same salary that would be paid if these students were working on the job under civil service regulations.

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Comic book was distributed by fraternal, religious and business organizations as part of "talk-it-up" campaign.

Q. Are these students specially supervised on their jobs?

LANG: Yes, they are. Through a grant from the Ford Foundation, we have been able to hire field supervisors who will actually work with the youngsters themselves.

Q. You mention that these students must have training in the fields in which they are working. Are the courses they are taking in school designed to better train them for the specific jobs they are holding down?

LANG: To a certain extent their courses in school are aimed at improving their work in this specific job. But they also take other more general courses.

Q. Is this a 12-month program or a 10-month program?

LANG: It is a 12-month program. The jobs are reserved for the two members of the student team for the full 12 months. In many cases, we assume that both students will be employed during the full summer vacation. This is not any commitment we make to them, but if the department in which they are working has job openings—and if the two students are doing good work—we would anticipate that the department would keep both of them on full-time during the summer.

Q. Do you expect any long-lasting effect from this program?

LANG: If we keep a student in school until he graduates, that in itself will have a long-range effect. What I think you have in mind, though, is within the particular job. Let me put it to you this way. Most of these jobs are covered by civil service. There is a lack of qualified applicants for them. If the student who is holding down this job under this program becomes interested in it, we would certainly encourage him to take the civil service examinations. Now, this accomplishes something else. Almost all of these positions require the applicant to have a high school diploma. So, you see, there is a double incentive to these students to remain in school.

Q. Do you find that students have difficulty adjusting to a program that calls for them to be working one week and in school the next?

LANG: This idea is not a new one in the city schools. Under the co-op program with private industry, students have been doing this for a period of some 20 years. Certainly it is not as easy on the teachers and the schools to have students in one week and out the other. But for the students themselves, we find that they are approaching their week in school with much greater enthusiasm and with a sense of purpose that they would not have had before they took part in this program.

Q. Do you think that this program will have any effect on the general behavior of the students involved?

LANG: First of all, the students involved in this program are not in any way delinquents. Nevertheless, they probably are being taken from a pool of teenagers who are most potentially delinquent. I would expect that these youngsters will develop a much more stable relationship to authority than they would if they did not have these jobs. For example, a student working as a clerk in the police department certainly would be less likely to find himself in conflict with members of that department.

Q. Do you feel that this program has had—or will have—any ef-

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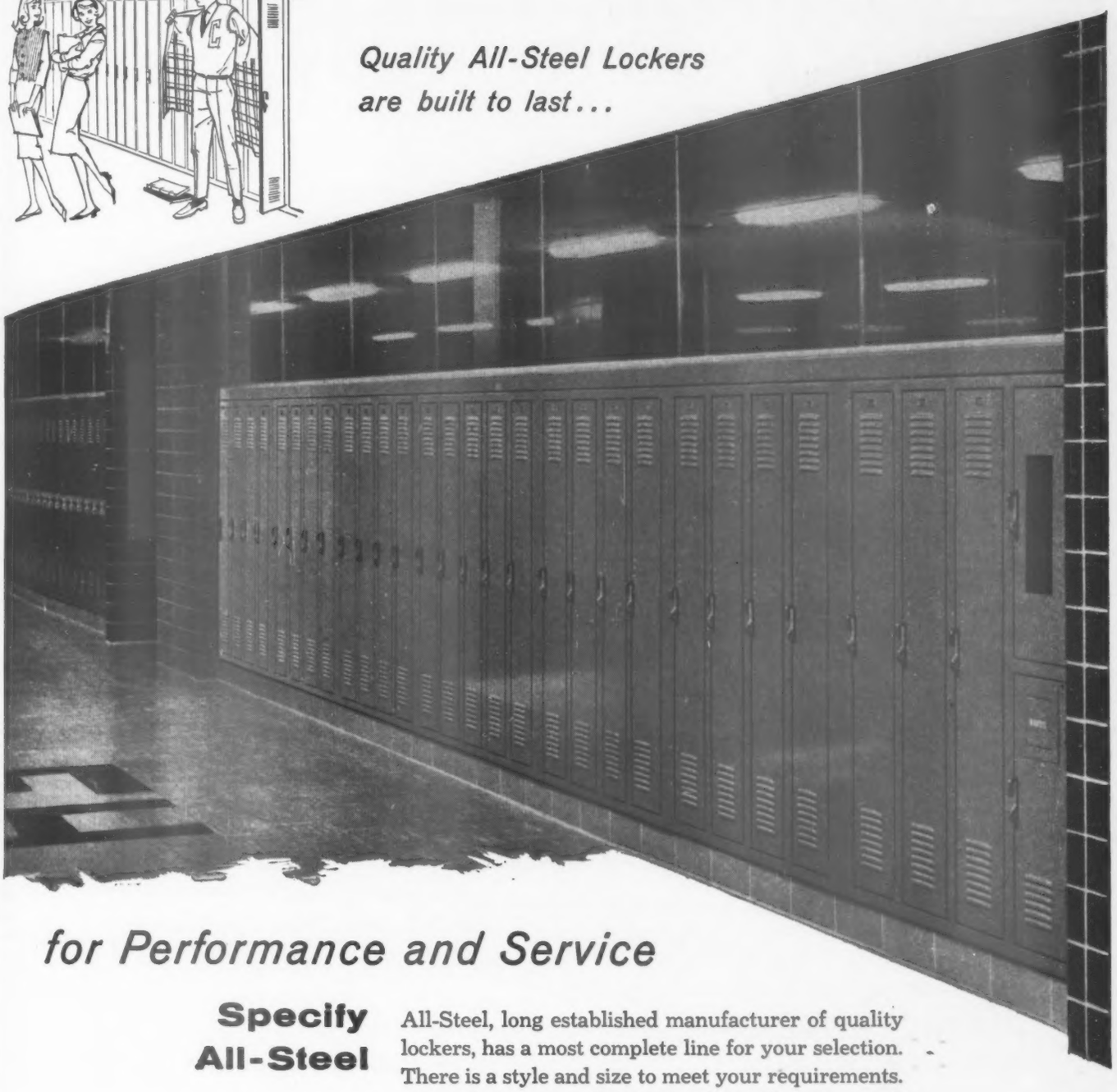

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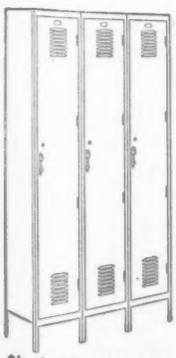

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fect on the teenagers who are friends of the persons who are participating in the program?

LANG: Yes. We're confident that the people who are in this program will spread the word about it and that we will have many more people clamoring for admission in the next few years. Unfortunately, we can only accommodate 276 students this year. But we hope to add 500 more students to the program next year and by the following year there should be at least 1,000 students participating in it. We also envision an expansion of the program outside of municipal employment. There are federal jobs and state jobs available in this city and there are various public agencies and authorities that are potential employers. Furthermore, we are beginning to work with some of the private industrial groups in this city who have participated in the co-op program previously. You see, the major difference between this program and the private industry co-op program is that in the latter the big companies that had openings would come to us and say, "We need four stenographers—send us your best." This meant that the job might very well go to students who did not need it. Under our program, we choose the students who need the jobs and who have the qualifications to hold them down. Now, if private industry will open up jobs on that basis, it will greatly help us to increase the program.

Q. How successful do you feel a program like yours can be?

LANG: New York City has an average of about 30,000 drop-outs a year. We hope to be able to hold 5,000 of those students this first year of operation. Eventually, we think that with this program we can hold 20,000 potential drop-outs in school. You know, this is an issue that sparks the imagination of everybody in the community. They all see the importance of it. Everybody is willing to give it a push. If the schools are able to organize all of the people who want to work in this campaign, there is no reason why eventually we can't hold every student who should stay. End

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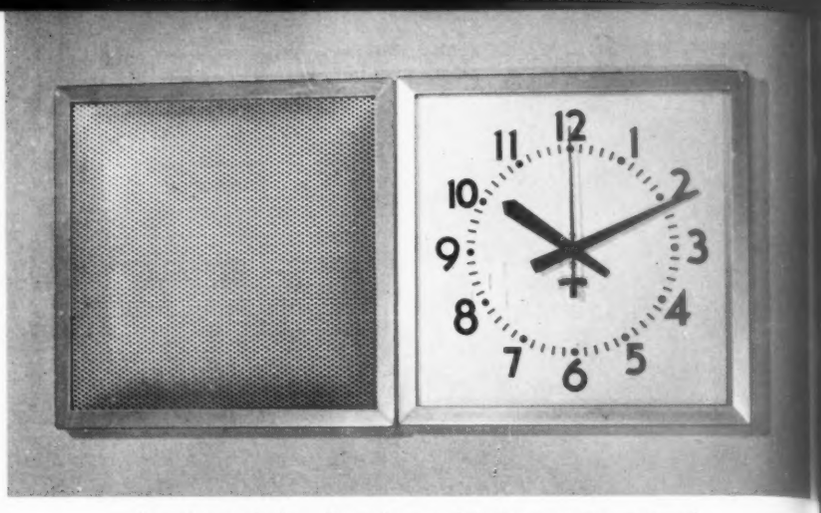

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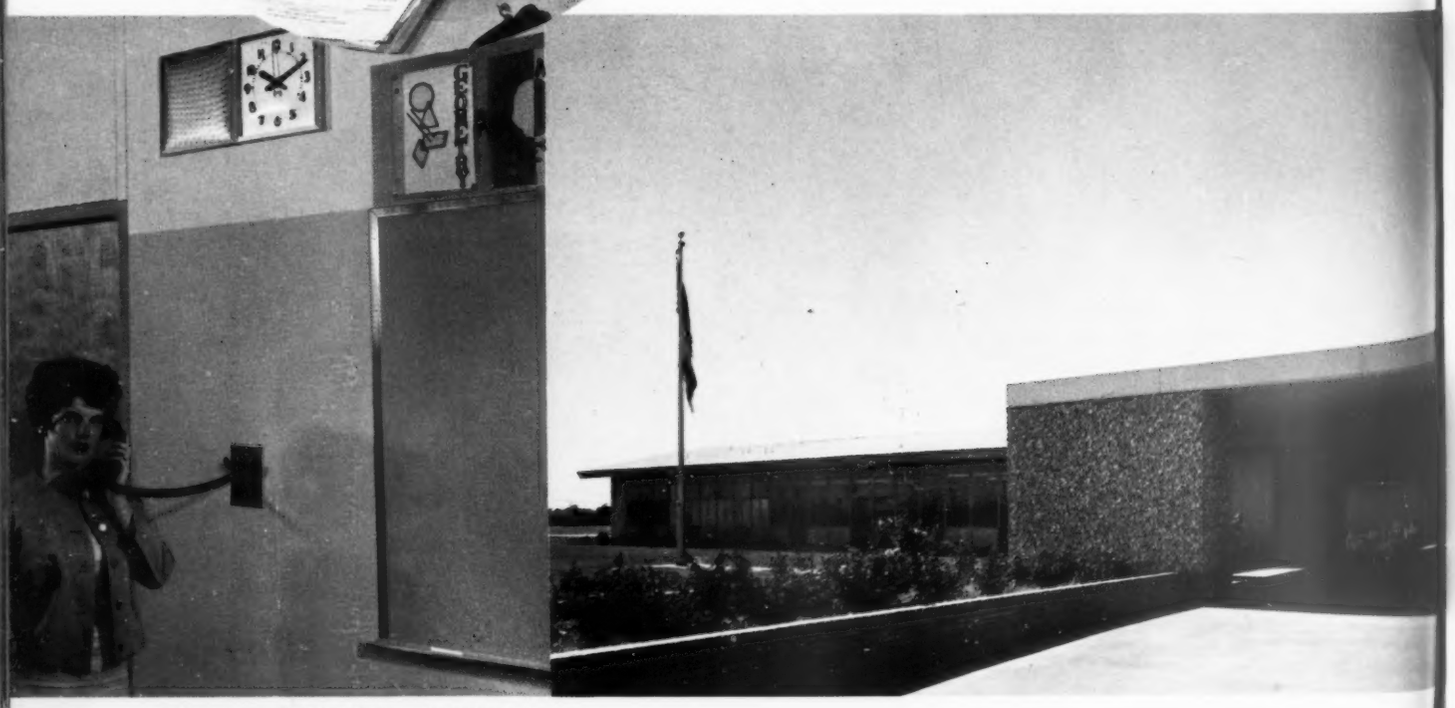

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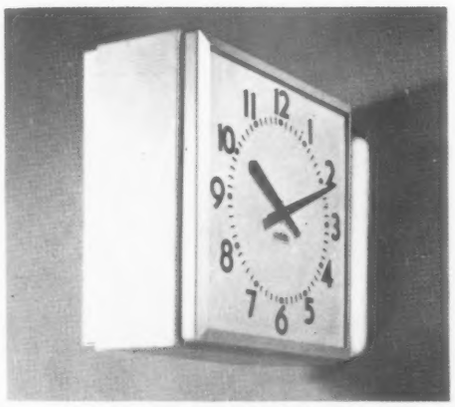

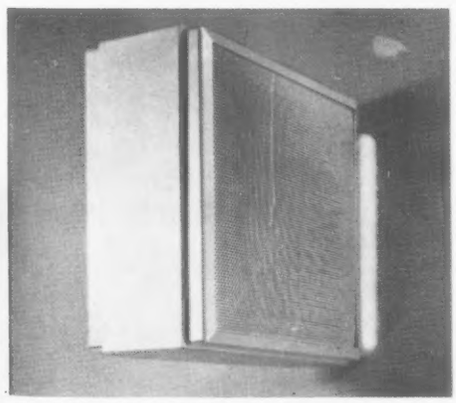

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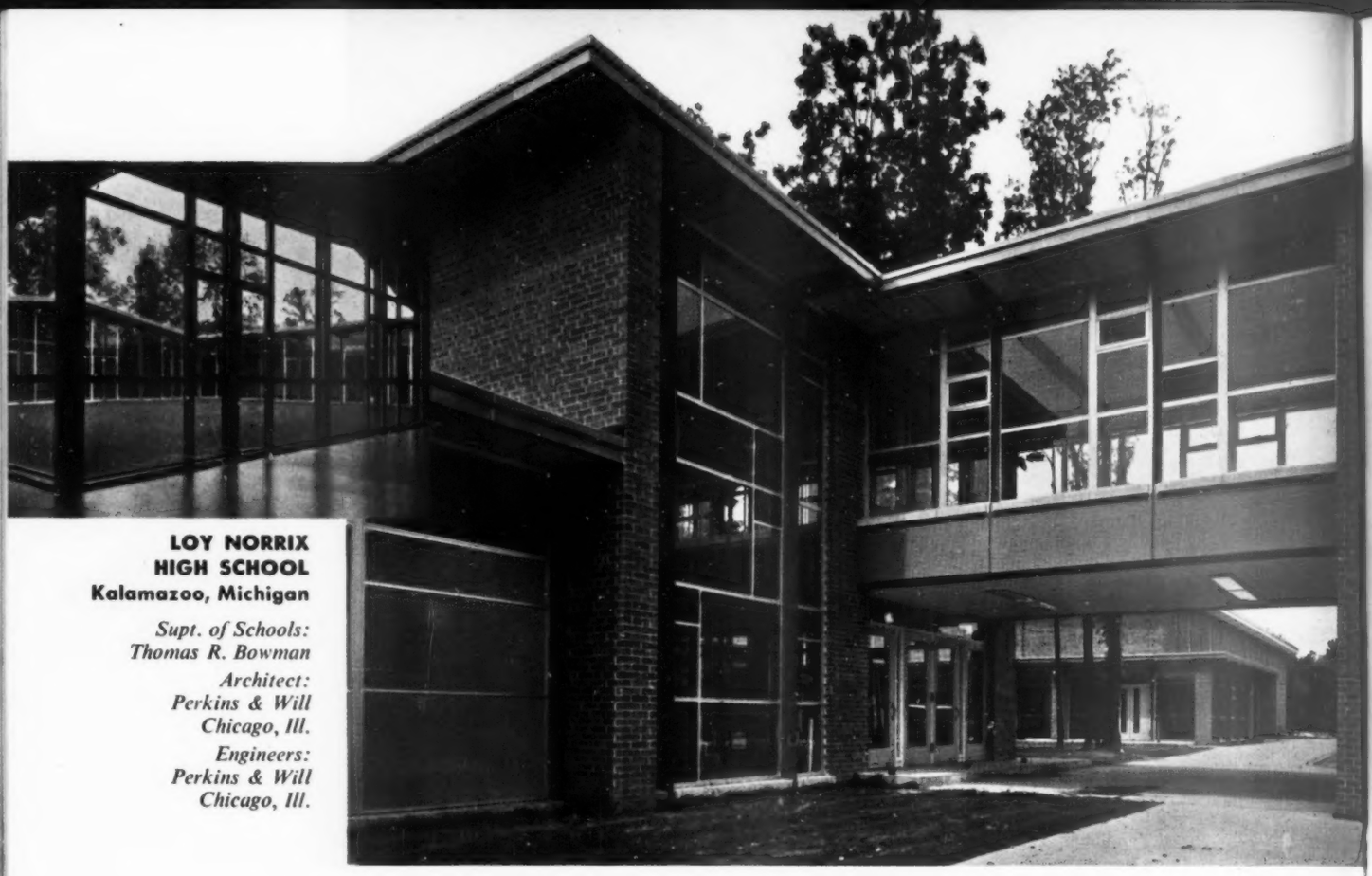

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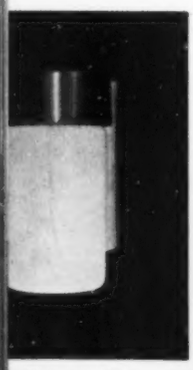

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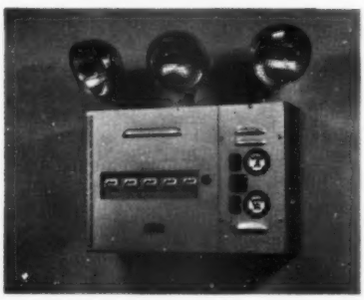

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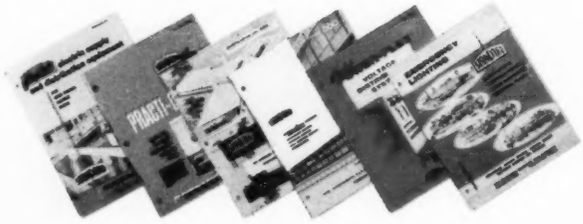

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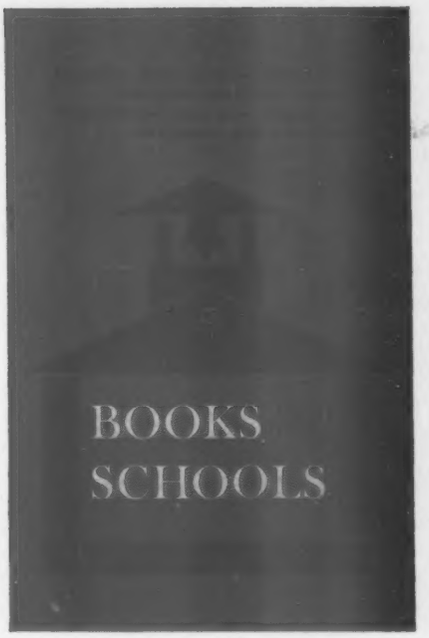

The dean of the University of Chicago's school of education states the case for books in the schools of today and tomorrow and outlines the new role they must play.

■ ■ ■ Books, it would appear, are becoming obsolete.

Teaching machines, television, filmstrips, tape recorders, movies, slide films and dozens of other programed devices have captured the enthusiasm of most schoolmen.

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In "Books in the Schools,"* Dr. Chase and 10 other authors write about books, reading and libraries from different aspects of their experience. All are agreed on one point: libraries are not obsolete.

Here, in excerpts from his chapter "Tools for man the learner," Dr. Chase eloquently states the case for books in the schools, and shows the role they will play in a world seemingly dominated by mechanical teaching tools.

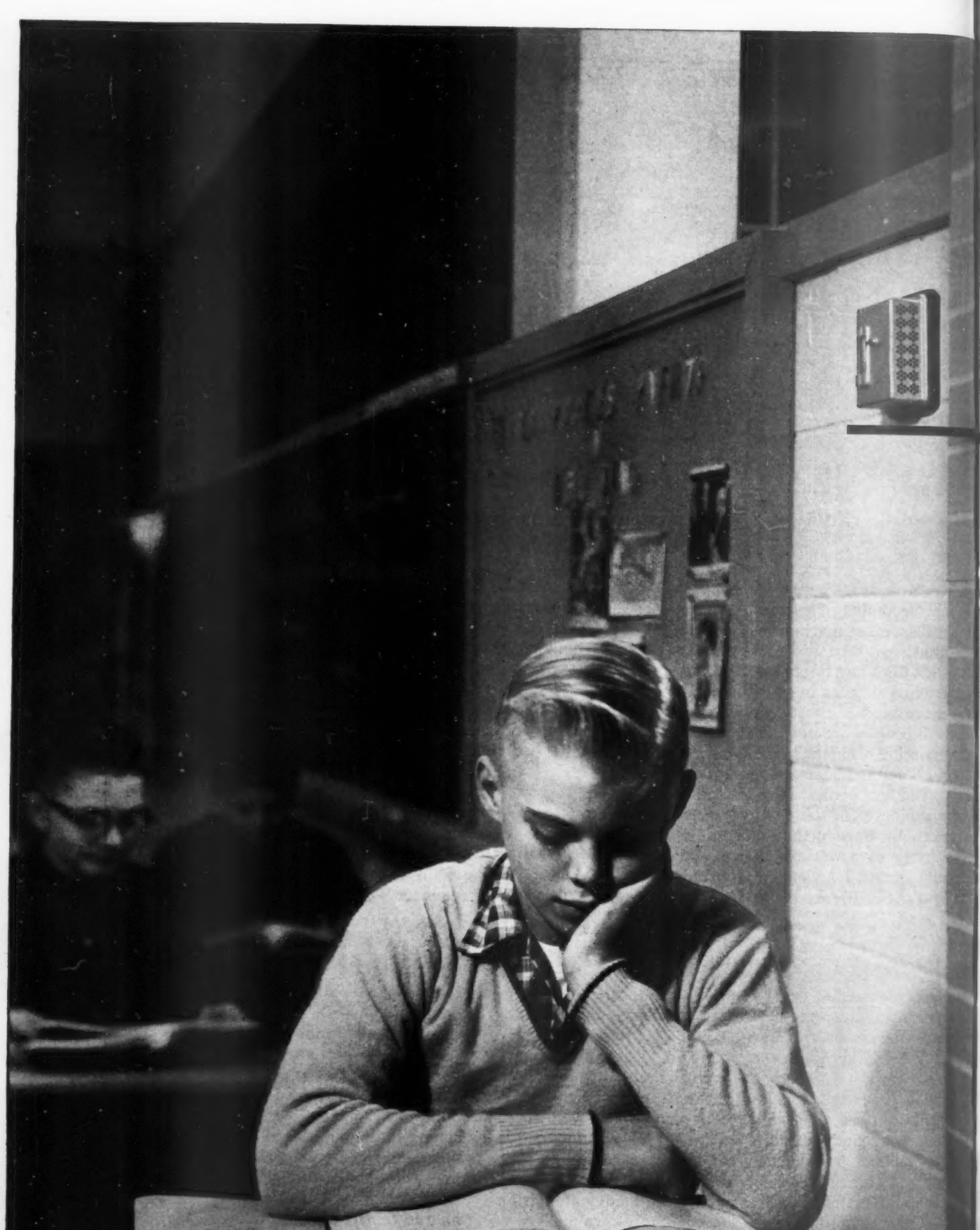
* BOOKS IN THE SCHOOLS. Edited by James Cass. American Book Publishers Council, Inc., New York. 65 pages. $1.

■ ■ About 500 years ago the invention of movable type opened up the possibility that any individual at times of his own choosing could draw upon the accumulated knowledge of mankind. This ushered in a new era in education, the implications of which are not yet fully realized. From the development of the printing press until very recent years, there were refinements and advances in the art of printing and the related graphic arts, but no major additions to the resources for learning represented by direct contact with nature, other men, and printed materials.

Then, within a single lifetime the electronic age introduced radio, films, television and a host of other audio-visual aids. These new technological aids to communication and learning were bound to have some impact on the provisions for education; and the impact is magnified by the growing recognition that provisions for education are so far short of the needs of our times as to constitute an invitation to catastrophe. It is not surprising, therefore, that out of the desperate wish for more effective learning there should come visions of an easy, rapid and errorless road to learning for the earth's millions.

As each new development gets the limelight, it seems to be attributed almost magical qualities for the improvement of education. A few years ago the claims for radio, recordings, and for first silent and then sound films were almost as impressive as those now being made for television. Now the new magic is in "programed instruction"; and some are beginning to think of linking many of the new technological developments and developing a "systems approach" to learning.

That we shall reap dividends from these explorations into the use of new devices and materials I do not doubt; but I do contend that these new developments increase rather than decrease the importance both of books and teachers. The alleged 50-year lag



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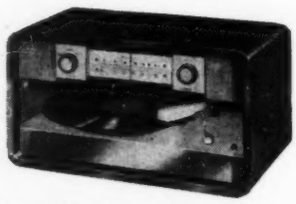

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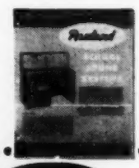

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in education may be nearer a 500-year lag, as we have not yet learned to make effective use of printed materials. I predict, therefore, that the most important revolution in education in the next 10 years will result from the more imaginative and effective use of books and other printed materials.

Four objectives

It may be profitable to speculate on the kinds of materials needed to achieve the four such different objectives as the following:

1. To provide vivid vicarious experiences which will serve to kindle the imagination and whet the appetite for learning.

2. To enable each learner to acquire essential skills and knowledge as rapidly as his inclinations and abilities permit.

3. To provide sufficient differentiation in approaches to learning in each of the major areas of knowledge so that every child may hope to acquire some understanding of the basic concepts and the modes of inquiry in the humanities, mathematics, the sciences, and the social sciences.

4. To encourage habits of independent inquiry and to enable each individual to pursue his inquiries as broadly and as deeply as his capacity permits.

What TV can do

When we examine the first objective we may think immediately of the possibilities in television and films. No one can question that there are enormous unrealized possibilities in these media. For example, a live or taped telecast of the United Nations' debate on the Congo might start a whole train of inquiries which could be pursued profitably through various branches of knowledge according to the inclinations and needs of particular individuals or groups of learners.

In pursuing any of the numerous studies that might grow out of witnessing the United Nations' debate, additional television and film viewings might, indeed, be useful; but none of these inquiries could be pursued in much depth without the use of printed materials. Moreover, while current periodicals and contemporary pamphlets might play a very important part, for real depth of understanding it would be necessary to make extensive use of a variety of books. Moreover, for some students books might even constitute a better introduction to the inquiry than would the viewing of television or a film. The main point, however, is that a telecast or a film can be very effective in raising questions which can be pursued profitably in many ways, but which will lead to optimum learning only if books in considerable variety and abundance are among the learning materials available.

Programed instruction

As we examine the second objective, that of allowing each individual to acquire essential skills and knowledge at his own rate, we naturally think of recent developments in automated or programed learning. Whereas the film or television resembles the lecture in conveying knowledge to many at the same rate, programed instruction allows each to move at his own pace. There are indications that

some of the newer developments in this field may lead to genuinely individualized instruction for some aspects of learning; and it is my belief that the potential in this respect is very great.

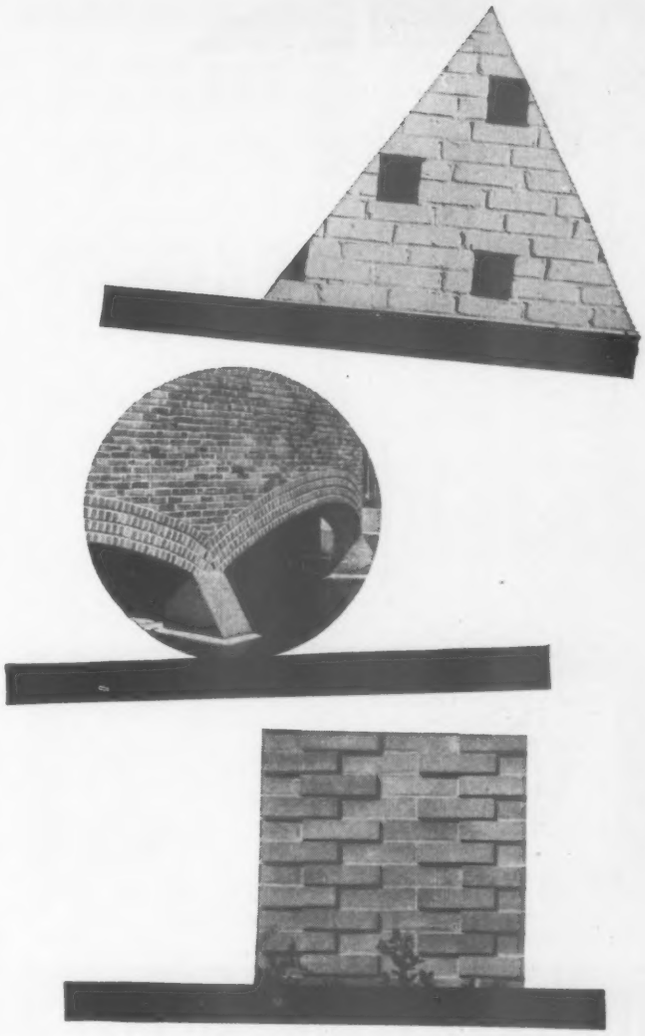
There are some who claim that it is possible to program anything that needs to be learned. It seems to me, however, that the advantages claimed for programing arise from the control exercised over the sequence in which the information is conveyed, the types of response permitted, and the reinforcement that comes from assurance of correct choice. It has been pointed out that programing can be done through books as well as through various types of machines. I have heard one enthusiast argue that the new field for book making is to use the programing technique in the writing of books. Before we go too far along that line, however, let us remember that this essentially was the idea behind many textbooks, especially the textbooks in reading, and let us remember that for the gains from programing there are also potential losses.

Combining materials

In dealing with an objective, such as differentiating the approaches to learning in each major area of knowledge so that individuals of differing abilities and interests may profit from the studies of other men, a great variety of instructional materials is needed. In some cases concrete objects and artifacts serve an essential purpose; in other cases, charts, pictures, films, recordings, and telecasts may provide useful information or insights; in still other situations programed materials may provide the necessary differentiation.

Theoretically, there is no limit to the amount of differentiation that may be obtained through films or videotapes. The same thing may be said in different degrees of programed instruction and of books. In each case, however, there are certain practical limitations. The live telecast provides an eyewitness account and each viewer can take only what he is able to perceive or read into what he sees and hears. Videotapes and films overcome some of the limitations of the live telecast and open up the possibility of preparing for each unit of instruction a number of presentations with varying degrees of concreteness and abstractness, and with varying degrees of detail and explicitness suited to viewers with differing backgrounds, inclinations, and abilities. The textbook falls short because its usefulness comes from standardized treatment, even though in the hands of a skillful teacher the standardization is by no means absolute. For books other than textbooks, differentiation is limited only by the number and variety of books that can be made available and the skill of the teacher.

Undoubtedly a combination of many kinds of learning materials can be made to provide a wider differentiation than is possible with the use of one alone. I would argue, however, that any combination that does not include books other than textbooks will fall far short of providing adequate differentiation. Moreover, I would contend that it is only through books that the learner can hope to acquire a real depth of understanding of the basic concepts,



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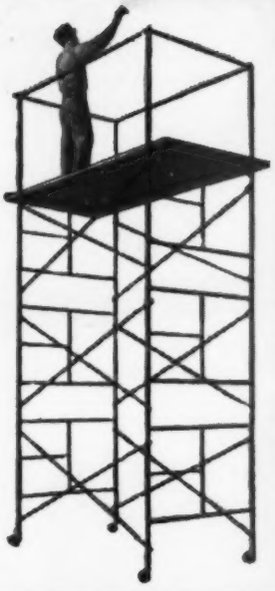

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the structure of knowledge, and the modes of inquiry in the major disciplines.

Independent learning

For the fourth objective, the development of habits of sustained and independent inquiry, books seem to me to have only one rival, namely, the direct study of phenomena in the laboratory or in nature. If the young child's natural impulse to understand and control his environment is to be transformed gradually into systematic inquiry, the individual must learn to order his own inquiries. This he cannot do if his freedom is too severely restricted. The textbook, programed instruction, television, and films all impose severe limitations on what can be observed and reacted to and thus stand in sharp contrast to the complexity of life situations. Books come nearer to approximating life because of the great number and variety of ideas presented and the wide range of treatments applied to ideas.

There are two major determinants of the amount of independence that can be developed in learning. The first is the range of choices which a given individual is capable of exercising; and the second is the number of degrees of freedom in the structure of the learning situation. The trick is to adjust the freedom in the learning situation so that the learner is challenged steadily to exercise a wider range of choice.

The relative effectiveness of programed instruction derives from the fact that the learning situation is so highly structured that the limits of choice are very narrow. What the program does, whether it is bound between the covers of a book or presented on film or by machine, is to break the desired learning down into a number of very small elements and prescribe a sequence the learner has to follow. The range of choices is kept very narrow and a sufficient number of clues is provided so that the learner cannot go very far wrong. These types of materials can become starting points for inquiry or can provide basic knowledge and skills useful in inquiry, but they do not lend themselves to the pursuit and analysis of evidence by inquiring minds. For the development of the ability to pursue independent inquiries with rigor and ferver, books are the richest source of help other than life.

Programing vs. books

The virtue of a good book is that it is not programed. It does not grip the attention in a vise and force it to move narrowly along a predetermined path. The textbook represents a rather awkward and ineffective attempt at programing. We can learn to program more skillfully where programing is appropriate and the programs can be offered through textbooks and in many other ways.

As we learn the possibilities of the newer materials and technical devices, we can facilitate and enrich learning in such ways as to close the gap between the needs of our age for education and the present provisions for it. Television, videotapes, and films of various kinds can be used to convey information, to dramatize a learning experience, or to provide a vivid introduction to new ideas or a new field of learning. Programed instruction can be used

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when it is important to progress through a carefully planned sequence of steps to acquire a skill.

Give them books

Books contribute powerfully to nearly all types of learning objectives and constitute indispensable material for some objectives. Moreover, books have for the individual aesthetic and psychological values that do not seem to pertain equally to other types of materials. Books can be one's own; they are easily transportable; they can be used in one's own time. Books are coming from the publishers in sufficient variety to whet many kinds of appetites and to serve many kinds of aspirations.

The publishers of trade books should react to the challenge of new types of materials; but they should not be tempted to forsake their own proper province. Books are necessary for the growing edge of civilization. They enable individuals to learn things that society has not planned for them.

Therefore, give us books: books filled with the great thoughts of our own and past ages; books which tempt the mind to stray from accustomed grooves; books which open up new vistas to the reflective mind. Give us a profusion of books: books through which the mind will scamper in pursuit of adventure; books that the reader may savor thought by thought; books planted with ideas that will sprout into action. Give us books and more books: books to set the imaginations of young children soaring; books with ideas of consequence stated so clearly, simply, and vividly as to tempt the child whose reading skills are undeveloped; books for the bright and for the dull, for the poetic and the pedestrian mind; books that bestow their favors lightly and books that yield their riches only to earnest and prolonged wooing. Give us books to entertain, to amuse, to comfort, and to challenge. Give us books on which artistry of design and illustration are lavished; give us plain, workmanlike books that perform well in a limited, clearly defined function; and give us books that have no function except to afford a glimpse into the trials, the agonies, and the exultations of man.

Prepare these books not for the schools but for people of all ages; and let the schools discover them and proffer them to their students and teachers. We have left the kind of world in which the teacher's chief function was to convey information. The school composed chiefly of classrooms is obsolete. In schools of the future, upwards of half of the student's time may be spent in the library, in science laboratories, or in other workrooms where he can search for knowledge, analyze data, reflect upon the ideas which he is encountering, and put his hunches and conclusions in writing.

The school library will provide a variety of resources, including recordings, microfilms, slide films, videotapes, charts, maps, and pictures. The most important of the resources offered, however, will be books in abundance in the humanities, the social studies, the sciences, and the practical arts—books of such range and variety that there will be something to arouse the interest and further the learning of the dull and the bright, the practical and the theoretical, the poor reader and the good student. **End**

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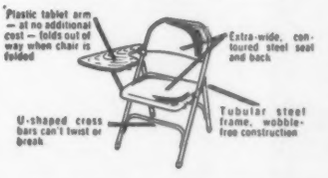
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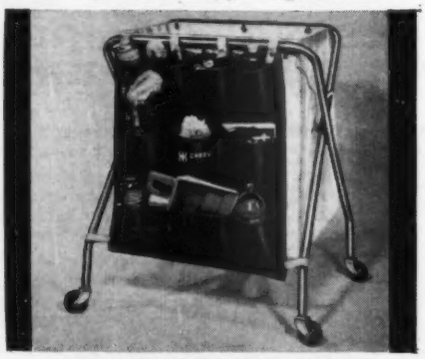

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How to serve hot lunch

In East Whittier, Calif., schoolmen used a snack bar to serve 250 type-A lunches every day while awaiting completion of cafeteria facilities. Here's how it was done.

■ ■ ■ Hot, type-A lunches can be served at a snack bar.

For a year, more than 250 hot meals were served daily at Granada Intermediate School, East Whittier, Calif., utilizing a snack bar which consisted of lots of counter space, a single four-burner range and a small refrigerator. The snack bar was operated while schoolmen were awaiting completion of a cafetorium which, when it opened, absorbed most of the snack bar's facilities.

According to East Whittier school officials, the snack bar operation was practical because extensive use was made of disposable paper service and plastic eating utensils, thus reducing requirements for storage space and equipment such as dishwashers. In addition, some of the food was bought already prepared and packaged in individual portions.

On a typical day, four food service personnel prepared the meal's cold dishes, such as potato salad, during the morning hours and made up individual portions in cups. These were placed on trays in the refrigerator. Bread was buttered and wrapped. Just before lunchtime, the main dish was placed in the oven in bulk, then portioned out into "hot" containers. Finally, portions of everything were placed in cardboard boxes with plastic eating utensils. Thus, each box contained a meal,

Lining up for lunch, children receive their box lunches, beverages and desserts through windows. About 100 meals can be served every five minutes.

without a cafeteria

complete except for dessert and a beverage.

At lunchtime, students filed past windows and were handed their lunches. They received their cartons of milk and their desserts at other windows.

According to Mrs. Rachel Working, supervisor of food services for the district, the Granada school was able to serve about 100 children in this fashion every five minutes. Student helpers assisted the food service personnel in passing out the box lunches to the children.

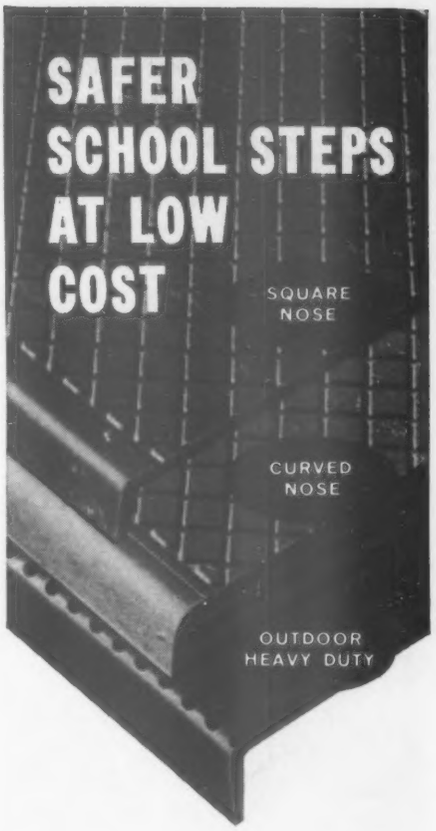
Not having a place to eat their lunch was no problem. When the weather was favorable, the students ate on the school grounds. On rainy days, they ate in their classrooms. "The fact that they were eating with disposable plates, containers and eating utensils, simplified the cleanup," says Mrs. Working. "They just dumped their trash in cans and custodians burned it."

Teachers were served the same lunches as children, except that coffee was made available for them. Those teachers who were on duty at lunch ate in the same areas as the children and supervised the cleanup.

"One of the disadvantages of serving box-lunches is that the students don't get much of a choice in their meals," says Mrs. Working. "We overcame this to some degree by offering a variety of sandwiches, in addition to the prepared meals.

"Despite the fact that Granada averaged about 40% participation in the lunch program, when the cafetorium became operational it took over part of the snack bar. The latter was just an interim solution. We would never think of it as taking the place of a complete cafeteria." **End**

Student volunteers assist snack bar personnel during lunch hour, passing out meals and taking money. They do not help in the preparation of the meals.



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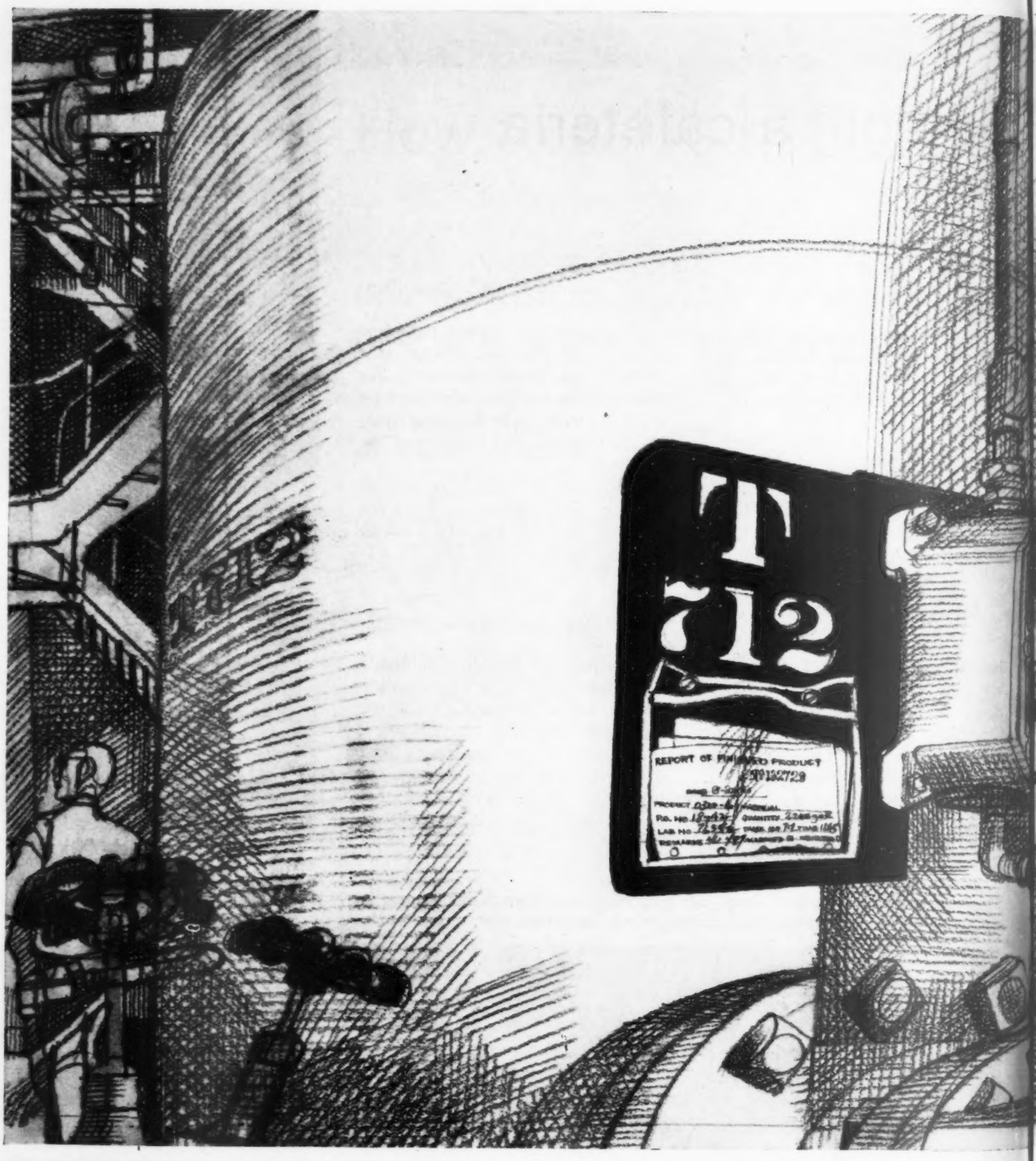

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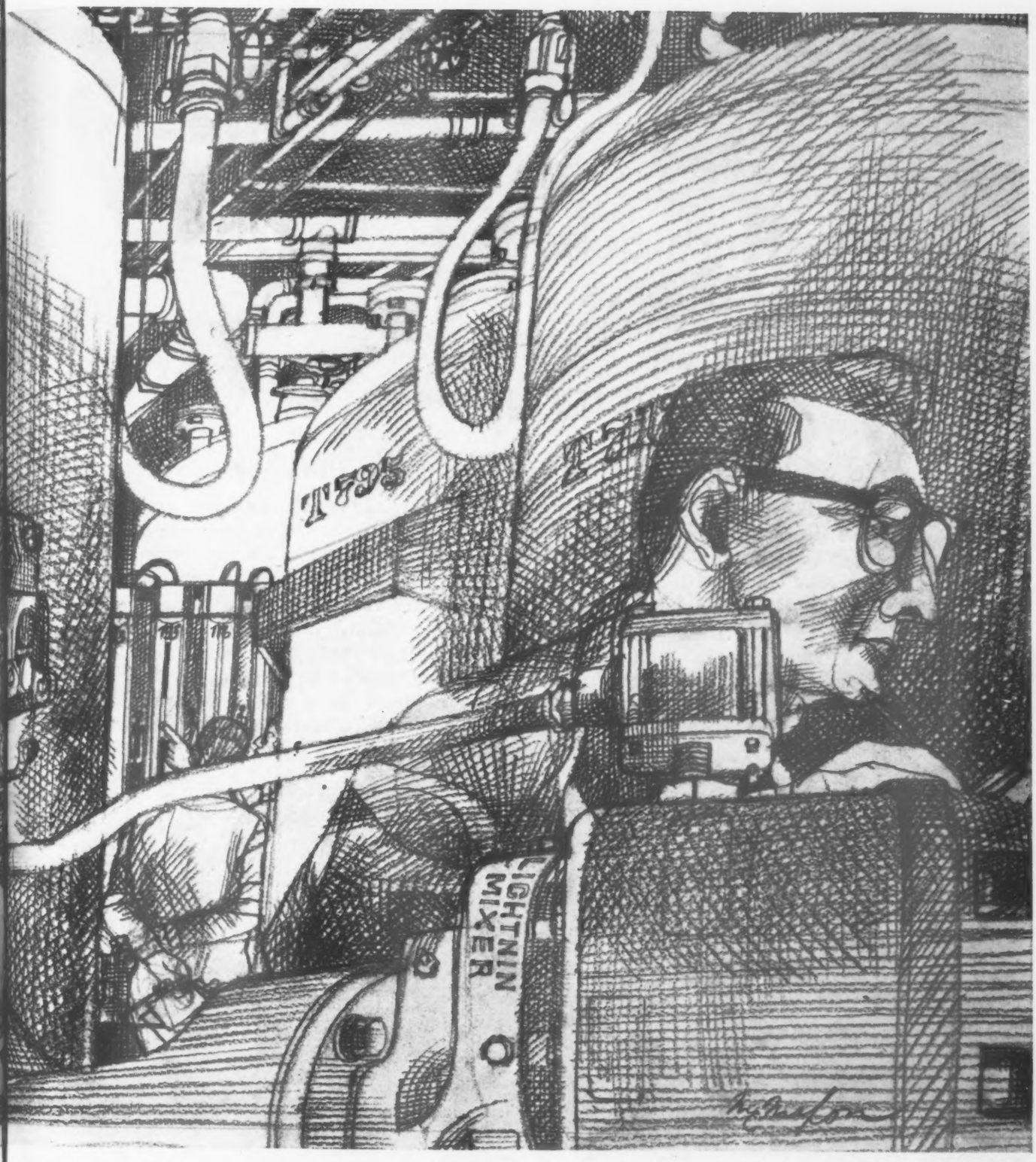

rejects it. That's how we protect you and how we protect ourselves. It is the reason we can guarantee every one of our products. Johnson's makes many heavy-duty products for building maintenance. For instance: WAXTRA!, a new combination of polymers and waxes that offers advantages neither could give you alone; and STEP-AHEAD, today's standard for quick-maintenance finishes; or FORWARD, the buffered all-purpose liquid cleaner that works so fast, so hard, so thoroughly. These and many others. All these products have one thing in common. They come to you as you expect them to. Always highest quality. Always exactly right. Every time.

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How to relieve teachers of Pupil accounting

In Houston, Tex., clerks and student volunteers compile pupil attendance and absentee records, relieving teachers of nearly all the bookwork. Here's how you can lighten the load on your faculty.

■ ■ ■ "Show me a teacher who has time to keep class records," says one superintendent, "and I'll show you a teacher who isn't teaching."

That may be an overstatement of the issue, but no teacher will deny that he spends too much time poring over attendance records, grade reporting and other bookkeeping chores—all to the detriment of his primary function. Most districts recognize the problem, and various devices, such as machine accounting and teacher aides, have been tried to reduce noninstructional work.

One of the simplest and most effective techniques is now in use in nearly 200 schools in Houston, Tex. Basically, the system shifts responsibility for recording pupil attendance from teachers to the school attendance office. The method makes less demand on a teacher's time, provides more accurate and faster absentee accounting, and requires no investment in equipment or personnel. Student volunteers do a lot of the routine work.

Until this year, Houston teachers recorded attendance for each of their classes in large ledgers. Every six weeks the teachers balanced their ledgers and sent them to the district's pupil accounting office where they were collated into a single report. This was submitted to state officials and used as the basis for financial aid.

Since each teacher had to balance the records for each of his classes, there were numerous opportunities for mistakes and it was a time consuming process, one which all the teachers deplored.

Under the new system, quick roll calls in homerooms and follow-up checks in classes during the day are all that is needed. This takes a total of five minutes for each teacher. School attendance offices do everything else.

The teacher's job

Every homeroom teacher has a deck of cards—one card for each of his pupils. The card lists a student's name, address, phone number, the homeroom teacher's name and room number, a notation of absences and tardiness, and remarks on discipline or suspension.

At the beginning of the period the teacher checks the roll, removing from the deck the cards of students who are not present. These cards are placed on a clip outside the room door and are picked up by student helpers a few minutes after the period begins.

In the school attendance office, girls use the cards to type up an alphabetical list of all absentees. The list is mimeographed and every teacher gets a copy before the end of the first class period. As the roll is checked in this and following classes, if a student is absent and his name is not on the absentee list, the teacher notifies the attendance office that a class is being cut.

This is done by putting the "truant" students' names on a slip of paper and putting it in the door clip. Again, student helpers make the rounds during each period to pick them up.

The teacher's responsibility for reporting absentees ends at this point. He has no records to balance or tabulate.

Office work

In the attendance office, the reports of "truant" students are doublechecked against the mimeographed absentee list and the attendance office's list of previously excused absentees. Thus, school attendance clerks can determine who is legitimately absent from school for all or part of the day, and who may not be legitimately absent.

Student helpers telephone the

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homes of all unexcused absentees and inquire of parents why the children are not in school. If there is reason to believe that a student impersonates his parent's voice, or if there is no answer at all, a call is made to the parent's place of business to verify the absence. The student may have been loitering in the hall or may have left school for a dentist's appointment. In some cases, an attendance worker will investigate.

This is rare, however. Since the new attendance system has been instituted, parents usually call the attendance office to report the absence of their children, and the expected duration of the absence.

If a student wishes to leave school for part of the day for a legitimate reason, he brings an excuse and checks out with the attendance office before leaving.

All these developments are noted on the teachers' cards, and also on a master absentee list retained by the attendance office. (It is from these daily master lists that records for each school are compiled and submitted to the district attendance office. Student volunteers and attendance clerks do this every six weeks.) When all the absentees have been accounted for, the cards are returned to the homeroom teachers.

When a student returns to classes, the attendance office issues an admit slip upon presentation of a written excuse. Two copies are made. One is retained in the office and the student keeps one to show to teachers whose classes he has missed.

The attendance system thus accounts for every child for every period of the day. Clerks take over the bookkeeping in each school, making one report for each grade level. District auditors work with fewer sheets—one from each grade in each school, rather than one from each teacher.

Says Dr. Henry Jahnke, Houston's director of pupil accounting, "This new system is much more efficient than the old one, and that's important. It has reduced cutting of classes and it has enabled us to identify student transfers and drop-outs at an early stage.

"But what's most important, we're saving our teachers." End

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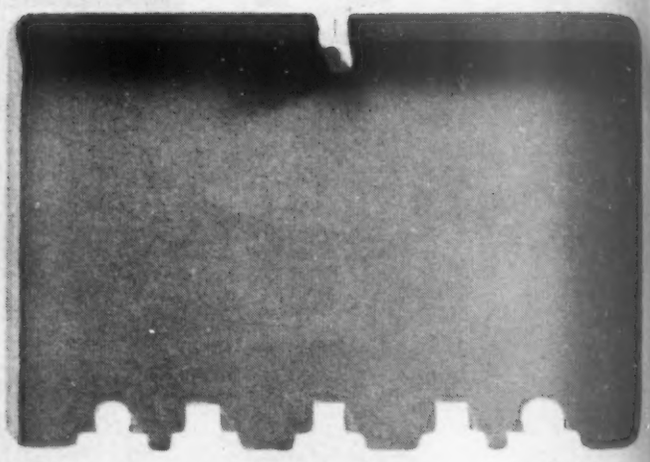

TWO-CHANNEL TAPE

For fifteen years...
Magneticon and the language laboratory grew up together. Ten years before there was a National Defense Education Act, Magneticon language laboratory equipment was being installed in this country and overseas; many of these installations are still serving students and teachers today.

All three language systems . . . the two-channel

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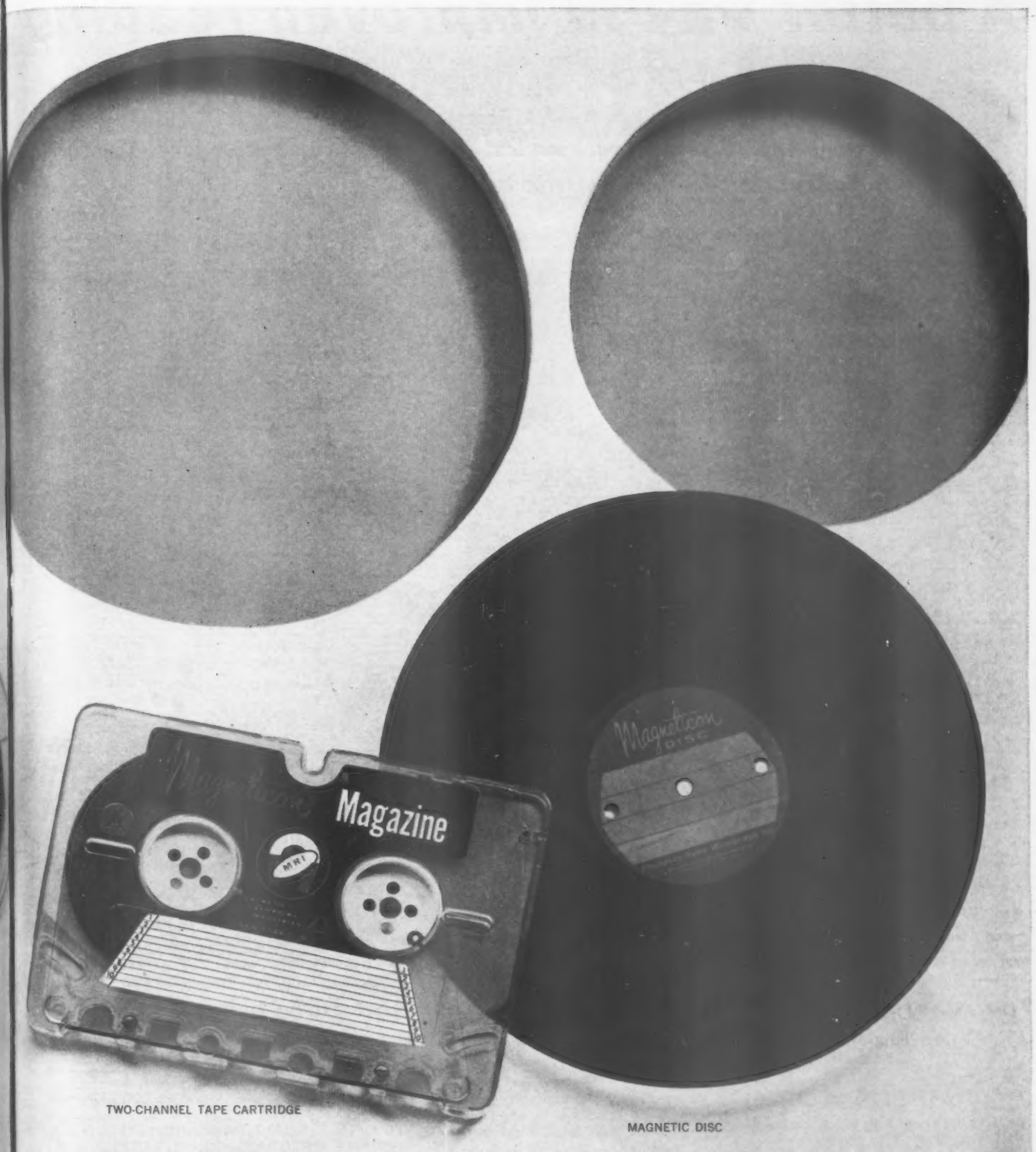

TWO-CHANNEL TAPE CARTRIDGE

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And now, the all-new TRW Magneticon two-channel tape cartridge completely eliminates tape threading, breakage, and spillage.

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The new, tested Craig Reader Programs now offer the first fully-integrated reading improvement programs designed to provide individual instruction in the class to assure maximum progress for each student—yet, free the instructor for the more creative aspects of his work in the classroom.

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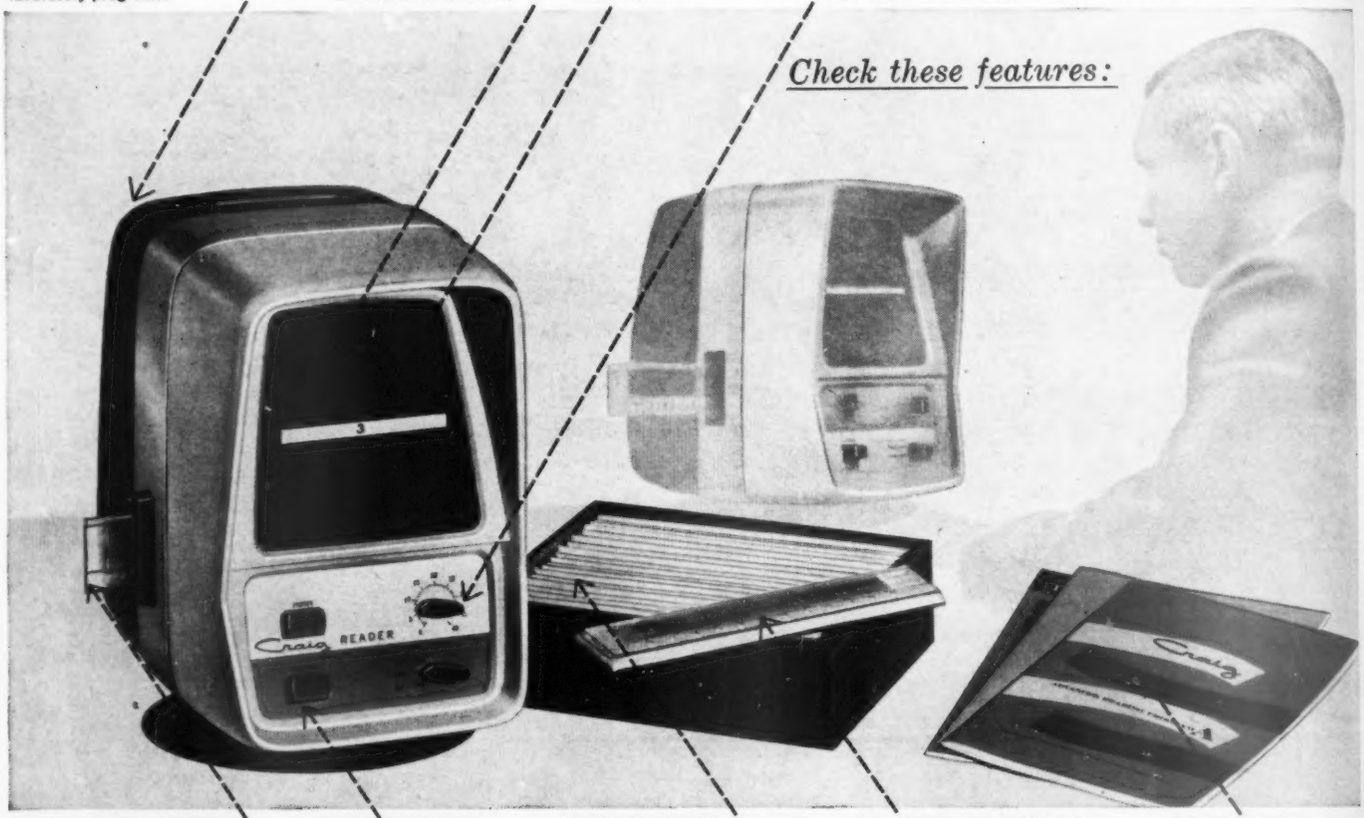

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A monthly review of ideas, new products and helpful hints

PREFABRICATED BUILDINGS SOLVE SPACE PROBLEM

Leadville, Colo.—The economic nature of this mining community poses a building problem for school officials, who must cope with sudden and violent fluctuations in population. But Leadville school administrators may have an answer.

If the population suddenly increases, they build inexpensive, prefabricated classrooms which can be occupied 60 days after groundbreaking ceremonies. Later, if enrollment decreases or if more permanent structures are built, the prefab units can be sold for other uses and the district can recoup its investment.

The prefab buildings are constructed of wood and aluminum. They can be erected on short notice for less than $10 a square foot. This actually happened a year ago when enrollment jumped about 25%. Two five-classroom prefabricated buildings were put up in a hurry after consultation with Educational Facilities Laboratories, the Educational Planning Service of Colorado State College and the Lumberman's Research Council.

According to Prof. Glen Nimnicht of Colorado State College, the buildings have all the necessities for good classroom instruction. Lighting, acoustics and ventilation are adequate. The classrooms are equipped with portable furniture. There is ample auxiliary space and teachers have expressed no objections to the facilities.

When and if Leadville's population stabilizes, schoolmen will build a more permanent school. The two prefabricated buildings will be sold—probably for use as a motel.

HERE'S A BETTER WAY TO FIND REASONS WHY YOUR TEACHERS QUIT

New Berlin, N.Y.—All teachers don't resign because of poor salaries, though this may be the excuse they give. If you can find the *real* reasons why your teachers quit, you may be able to cut the rate of faculty turnover, as well as to alleviate your recruiting difficulties.

The trouble is, a resigning teacher won't always divulge his real reason for quitting. He has a natural fear of not getting a good reference for potential employers.

In this community, two researchers working on a graduate project surveyed teachers who had already relocated to find out why New Berlin had an annual turnover of 20%. The idea was that once teachers had found new employment, they would be more willing to speak up because their security was assured.

High school instructors Lloyd Taylor and Daniel Moskwa mailed survey questionnaires to all full-time elementary and secondary teachers who had left the district during the preceding 10 years. The questionnaires, which probed reasons why a teacher might quit, asked for honest answers and promised that replies would be held in confidence. Two weeks later Taylor and Moskwa mailed postcard "reminders." This, plus the promise of anonymity, helped them get a return of 83.8%.

The researchers discovered that

Continued on page 112

HOW TO FINANCE—AND SPARK INTEREST IN—A SCHOOL NEWSPAPER

Cincinnati, Ohio—One problem with a school newspaper is that "news" is at least a week old before it reaches the students. A second puzzle is financing the publication.

Journalism students at Colerain High School here have licked both problems by purchasing an offset duplicator and doing all of the printing themselves, rather than contracting with a local printer for the job. Each issue of the paper costs about $50—compared with $150 under a commercial contract—and each edition carries front-page news of day-old events. The actual offset operation, which is nontechnical, is only an afternoon's work for the paper's staff.

Not surprisingly, sales of "The Lantern" to Colerain students have increased about 30% because of its genuine news content. Advertising in the paper has increased too, according to Hugh H. Stubblefield, the school's publications advisor.

The duplicator was purchased with contributions from the school district and the PTA, which went for a down payment, and receipts from advertising and sale of the paper, which enabled the journalism students to meet monthly payments.

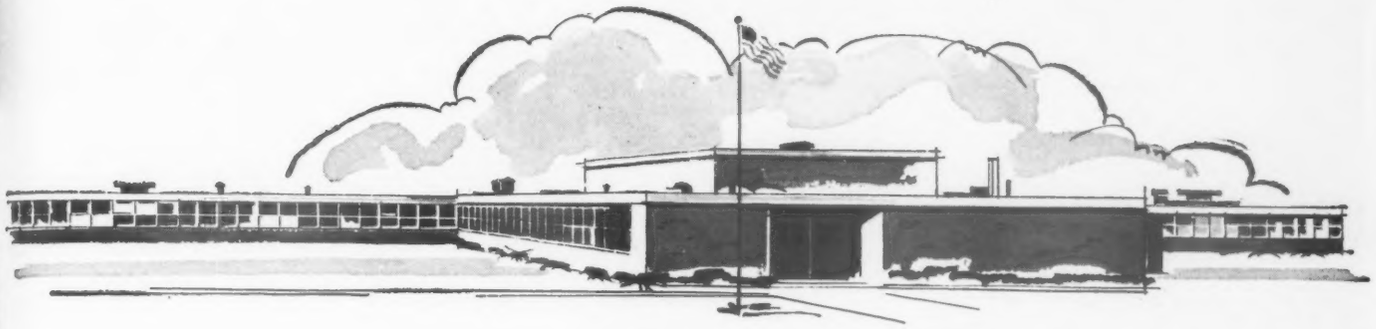
Photo courtesy Ditto, Inc.

Mr. Hubert G. Olson, Superintendent of Schools,
Independent School District No. 271, Bloomington, Minnesota, says:

"A Honeywell Thermostat on the class

Mr. Hubert Olson stands in the Library of Washburn Elementary School—one of four new schools built in the Bloomington School District

room wall is a real asset to learning!"



ARCHITECT: *Corwin, Seppanen and Associates, St. Paul, Minn.*
CONSULTING ENGINEER: *Ralph D. Thomas & Associates, Inc., Minneapolis, Minn.*
MECHANICAL CONTRACTOR: *Axel Newman Heating & Plumbing, Inc., Minneapolis, Minn.*

Teachers can adjust classroom temperatures to match the activity in each of Bloomington's four new elementary schools. Result? A more comfortable environment for learning!

"Every classroom in each of our four schools is designed for maximum student efficiency," says Mr. Olson. "And that includes proper classroom temperatures, too. With a Honeywell Thermostat on the wall of every classroom, our teachers have fingertip control over room temperature. They can adjust temperatures to compensate for outside weather changes; or, to match a particular activity during the day. Thus, our students are never distracted by an uncomfortable classroom. They work in a happier, healthier environment with fewer absences and greater in-school efficiency."

In schools, the wall is always the best place for the thermostat. On the wall, it feels the temperature the way students do. It is also more convenient to read and adjust. Fuel bills are lower because wasteful overheating is eliminated.

You can depend on Honeywell to recommend the best temperature control system for your school because only Honeywell designs and manufactures all three types of control systems—electric, pneumatic and electronic. For further details, call your nearest Honeywell office. Or, write Honeywell, Dept. SM-11-122, Minneapolis 8, Minnesota. In Canada, write Honeywell Controls Limited, Toronto 17, Ontario. *Sales and service offices in all principal cities of the world.*

Mounted in every classroom, the Honeywell Round Thermostat enables teachers to adjust room temperatures to fit specific learning activities.

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(Circle number 737 for more information)

many teachers resigned for reasons other than low salaries. Some comments on the survey questionnaires: "I had an unresolved misunderstanding with the administration." "There was a lack of good housing available for rent or purchase." "Unfavorable conditions existed for new teachers."

In their report to the school board, the researchers pointed out that these comments, as well as low salaries, were indeed genuine reasons for faculty discontent. Then they made several recommendations for reducing teacher turnover. Among them:

1. Make an effort to acquaint new teachers with their duties, and help them get situated in their homes and the community. A thorough description of board policy, the teacher's job, the community, the students and the faculty should be given to each *prospective* teacher.

2. Prevent misunderstandings with the faculty by frequent informal meetings with individuals, so complaints can be aired before a letter of resignation is submitted. This, Taylor and Moskwa said, might be better accomplished if board members, rather than administrators, met with the teachers.

3. Give extra consideration to chief wage earners on the faculty. Give them some administrative responsibility—and extra pay.

4. Initiate and maintain records on turnover, showing principal reasons for resignation.

5. Communicate with teachers on matters of policy and performance expectations, perhaps through the teachers' associations, especially at the start of the school year.

HOW TO GET ORGANIZED IN A NEW HIGH SCHOOL

New Shrewsbury, N.J.—"Getting organized in a new school could be a nightmare," says Monmouth County Superintendent Frank Weinheimer.

But in his district, Weinheimer has a solution. He opened a new high school here in September. All last summer the school's faculty was on the job—outlining courses, developing guidance programs, even planning student activities and visual aid materials.

Moreover, the teachers worked together, learning how to cooperate on common problems which would come up during the regular term. "With this kind of joint planning," says Weinheimer, "we can be sure we won't spend the whole first year in the new school just getting organized."

REDUCE PLAYGROUND INJURIES

Photo courtesy Mitchell Rubber Products Co.

***No danger of serious** playground injuries at Chatsworth Park Elementary School in Chatsworth, Calif. Interlocking pieces of butyl rubber mat, ribbed on bottom and smooth on top, are 3/16" thick. Mat has beveled edges on perimeter, covers areas near jungle gyms, slides and swings.*

GREENER GRASSES DON'T MAKE BETTER LAWNS

If the grass is greener in your neighbor's district, it may be because *you* have a better lawn.

School districts all over the country are imposing lush, verdant grasses on their grounds. Beautiful they may be, but practical they aren't. These "estate" lawns are extremely expensive to acquire and maintain.

According to the Locke Steel Chain Co., lush lawns are risky for most schools. They require from four to six inches of high-grade topsoil, large supplies of peat moss, lime or sulphur, a good grade of commercial fertilizer, a top dressing of manure, and—of course—the very best in seed. With all of this, weather conditions must be cooperative and the lawn must be tended carefully and often.

When hundreds of exuberant youngsters are involved, the lawn could be ruined in a single recreation period.

Contractors and landscapers usually offer two other lawns which, though less luxurious, are more practical. These lawns are known as the Class B Standard lawn, and the Utility and Service lawn. The lawns require less growing aids. They have greater resistance to traffic. And they don't require the services of a green-thumbed gardener. Your present grounds staff should be able to maintain them properly.

To keep any school lawn looking good, the Locke company suggests the following tips:

1. Make sure the shortest distance between two buildings is paved. This will keep children from wearing irregular paths through otherwise beautiful lawns.

2. Grass should be allowed to grow to a height of at least four inches before it is cut for the first time. Let the grass grow to 2½ inches before subsequent cuttings. It should never be cut below 1½ inches.

3. After cutting, clippings should remain on the ground. They build up organic matter in the soil and thus add to grass growth. If clippings are thick, thin them out so as not to "smother" the growing grass.

MORE PAPERWORK . . . BUT HERE'S A REPORT THAT REALLY HELPS

Eureka, Calif.—The last thing a school administrator needs is more paperwork and formal reports. Agree?

So does John L. Argo, assistant superintendent in Eureka, Calif. But Argo has developed a report which has more than compensated for the clerical time involved.

In Eureka, clerks prepare a "re-

Now! A New Hammond Spinet Organ for Your school with More features for the Money than ever before!!

The new Hammond Spinet Organ in mahogany, $1495 F.O.B. factory, less Federal Excise Tax. Prices subject to change without notice.

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Its graceful styling and hand-rubbed finish will add a pleasant note to any school surroundings. And you can own this magnificent new Hammond Spinet for only $25 down. For a free demonstration in your school, call your Hammond dealer (listed in the Yellow Pages under "Organs"). Also send the coupon for two helpful free booklets.

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(Circle number 723 for more information)

port of purchases" every year. This is a mimeographed volume of about 35 pages which summarizes the dollar value of all school purchases from each vendor. The report also includes a statement of the district's purchasing policies and excerpts from the state code governing purchases.

"The information isn't difficult to assemble," says Argo, "because it is developed by the district bookkeeping office from accounts payable vouchers. These are filed alphabetically by vendor. Clerks copy down the figures and, in appropriate columns, note the vendor's location, whether the purchase was for elementary or secondary schools, and the fund from which the purchase was made. Then, they total the columns. "This enables us to:

"1. Determine the relationship of local to out-of-town purchases for each fund.

"2. Evaluate our purchasing policy annually.

"3. Defend purchasing practices to vendors who may bring pressure upon individuals.

"4. Tell at a glance how much business went to any one vendor, a defense against charges of favoritism in purchasing.

"While the idea of more paperwork is repulsive to all of us, we believe the results this report has achieved are adequate compensation for the clerical time involved."

Photo courtesy Louisville *Courier-Journal*

HOW TO CULTIVATE STUDENT INTEREST IN ART

Louisville, Ky.—Students here have the opportunity to view color reproductions of famous paintings, all being displayed in their own schools.

According to Martha Christensen, the district's art supervisor, the reproductions are exchanged between schools every Friday. Thus, students in every school have the chance to see about 35 reproductions during the year. The pictures are displayed in prominent locations.

The "Picture of the Week" program includes famous works of such artists as Modigliani, Utrillo, Van Gogh, Renoir, Dufy, Monet, Degas and others. The names of the artists and the paintings are put on each reproduction. (Above, Modigliani's "Girl with braids.") Miss Christensen says the purpose of the project is to have the children look at many different forms of art expression. "We hope that they will become so interested in pictures that they will try to find out more about the artists."

BOMB SHELTER DOUBLES AS AUXILIARY CLASS SPACE

Sapulpa, Okla.—Here's how you can kill two birds—and perhaps save some lives—with one stone in your district, and do it at minimum expense:

Superintendent Noel Vaughn has acquired $265,000 from the Federal Civil Defense Administration. With the funds, his district has erected a combination bomb shelter and auxiliary educational space next to a new high school.

Vaughn got his idea last year when a tornado swept through town and destroyed some school property. He needed classrooms and the government needed bomb shelters, since Sapulpa is located near the industrial complex of Tulsa. After surveying the situation, the government agreed to provide nearly all funds required for construction if the building were erected according to federal specifications. The project was begun last November and has just been completed.

The shelter, partially underground, has 13-inch concrete walls and an 18-inch concrete ceiling. There's an exit through decontamination showers, several emergency escape hatches and special doors to deflect radiation. The shelter is fitted with air conditioning, and space is provided for emergency generators, food storage and serving, bunks and a clinic. It will accommodate about 600 persons. As a tornado shelter, it will accommodate about 1,000 persons.

Educationally, the shelter provides dressing rooms for athletic teams, a wrestling workout room, and space for athletic and mechanical equipment storage. A corridor connects it with the main gymnasium. One flight up, on the ground level floor, are five classrooms, restrooms and an office.

"This building," says Vaughn, "is a bargain all the way around. Not only is it a shelter against nuclear attack and tornadoes, we'll be using it daily."

WHEN THEY GET TIRED OF TELEVISION . . . HERE'S A GOOD SIGN

Skowhegan, Me.—You know the old expression, "You can lead a horse to water, but you can't make him drink." Parents and educators alike have paraphrased it to read, "You can give a child a book, but you can't make him read."

However, a non-educator, non-parent found that some children don't have to be told to read. This "do-it-yourself" librarian acquired 25 books from a library about 30 miles away and opened up a branch in his own home. The word spread so quickly that within a two-week period he loaned more than 40 books to youngsters. One boy borrowed eight books to read—himself, plus seven others which he brought home to his brothers and sisters. Some children volunteer to read to others.

It's an encouraging sign.

New Contrast® Floor Polish prevents black marks . . . ends buffing!

IT'S A GREAT TIME-SAVER. A MONEY-SAVER, TOO.

Imagine! No more unsightly heel marks. No more buffing either. Just spread Contrast on any type of flooring, and let it dry! That's it. Contrast shines as it dries.

But don't let this easy maintenance fool you. Contrast does a man-sized job. Colorless, wax-free Contrast Floor Polish will not . . . cannot . . . discolor even pure white floors. And rubber marks, scuffs, water spots and all other beauty-destroying nuisances will become problems of the past.

Try slip-proof Contrast on any floor. Better yet, give it a real workout. Test it on your toughest floor problem. You'll be amazed and delighted over the way it ends floor maintenance headaches. One gallon protects and beautifies approximately 2000 square feet.

Right now, contact our representative . . . the Man Behind the Huntington Drum! Ask him for more information about Contrast Floor Polish.

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SM FOOD CLINIC

Richard Flambert answers your feeding questions

QUESTION: Our school board is caught up in a debate on the pros and cons of air conditioning our high school's cafeteria kitchen. About 600 hot meals are prepared there every day and the cafeteria employees often complain about the heat. The rest of the school is not air-conditioned. Is it a good idea to air-condition the kitchen?

■ It is the consensus among engineers and consultants that a kitchen should not be air-conditioned. In your case, the rest of the school is not; even if it were, I would still oppose the idea.

I have yet to see an air-conditioned kitchen where the employees enjoyed their work. Going from one area to another, from one room to another, from one piece of equipment to another, results in such temperature changes that colds and sinus infections soon occur. An air-conditioned kitchen is always drafty and it is impossible to maintain even temperatures throughout the area. In addition, a cool kitchen affects the temperature of the food after it has been cooked. Employees will complain about the heat, but this is an occupational hazard. My principal objection to air-conditioning a kitchen is the fact that it is unhealthy.

QUESTION: Our cafeteria supervisor has suggested surveying our students in order to determine their preferences for certain menus. However, we are afraid that we'll wind up with hot dogs, hamburgers and pizza pie every day of the week. How can we find out our students' preferences without laying ourselves open for nutritionally poor meals?

■ It is a waste of time to survey students. Your purchase records should tell you just what the popular items are. There is nothing wrong nutritionally with either hot dogs or hamburgers, and the fact that most children like them shows good taste and good judgment. The average pizza pie is a thing of horror and I would avoid it like a plague unless it has sufficient meat to balance the usual hot tomato sauce and spices. What is important is the rest of the meal. If you serve carrot sticks, celery sticks, crisp salads, homemade desserts, whole wheat bread, and tasty vegetables together with your entree and milk, you will have well-nourished children.

QUESTION: We have a terrible waste of food in our two cafeterias. Invariably, the cooks make too much—even though they are frequently cautioned. How can we control our quantities?

■ It is important that you obtain daily count so that you know how much to prepare. Apparently you have not paid too much attention to the guides that are provided free by your state school lunch director.

The School Lunch Act calls for a minimum of two ounces of protein for each elementary school child at lunch. Multiply the amount of ounces to be prepared by the number of children to be served and prepare just that much. If you are serving peas, and the av-

About the author. Richard Flambert is a partner in the firm of Flambert and Flambert, San Francisco, food service consultants and engineers specializing in schools and institutions. He is chairman of the board of the International Society of Food Service Consultants.

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61-117

(Circle number 710 for more information)

erage size order is an ounce and a half, and you have 200 children to serve plus 24 adults, you should therefore prepare from 336 to 354 ounces of peas. This means a little less than three gallons.

There is no excuse for overproduction, and you should supply your cooks with proper scales, scoops and measures. A little practice with them will soon result in better portion control. A more drastic measure might be to give the cook just so much food with which to work. If she runs out by dishing up too much, she should be held accountable for it. Perhaps you have been too lenient by permitting the cook to use more food than she needs.

QUESTION: What are the recommended storage conditions for frozen foods, fresh meats, fruits and vegetables, and dry goods such as flour and beans?

■ This depends upon the climate in your area. Generally, frozen foods should not be kept under refrigeration for longer than six months. The ideal temperature for their storage is from zero to —5 degrees, but the items in the freezer must be rotated to assure last-in, last-out; first-in, first-out.

Fresh meats should be stored just as little over freezing as possible—33-34 degrees is ideal. There should be good circulation around the meats, and for this reason we recommend slatted racks and shelves.

Fruits and vegetables should be kept between 38 and 40 degrees.

Storage temperatures for flour, beans, raisins, and dried fruits will depend entirely upon your area. The ideal temperature is between 55 and 60 degrees. Where these items are not used extensively, the inventory should be as small as possible. In temperate zones, the storerooms generally are in the high 70's and if the items are kept for but a few days there will be no infestation or damage. If the temperature is higher than this, or if the items are kept for any length of time, it is imperative that they be refrigerated. Canned goods can keep for approximately six months at the normal storeroom temperature.

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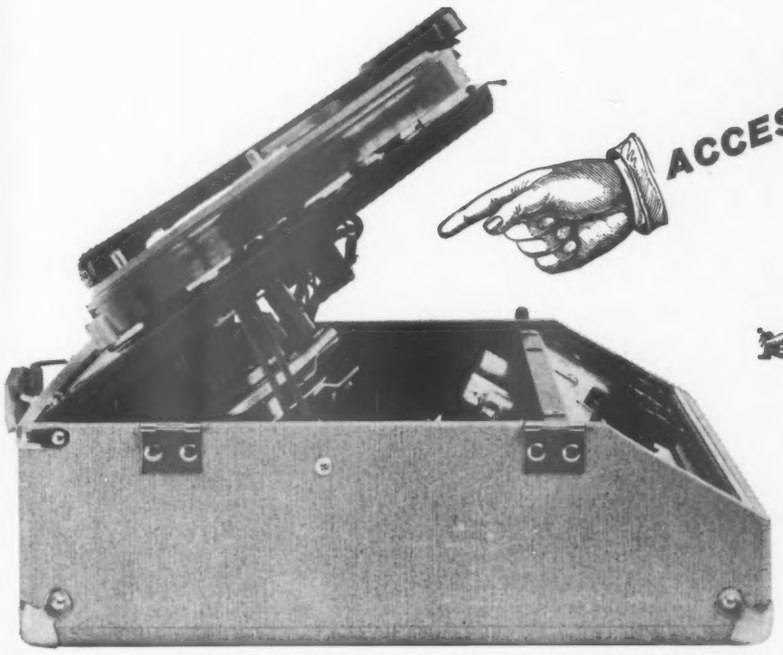

Newcomb Model AV-164V-LC8 transformer-powered player with built-in jacks for eight pairs of headphones.

These Newcomb products are built for a purpose and not to meet a price. The fact they are unexpectedly low in initial cost is the result of high production and distribution efficiency. Specialized engineering, carefully selected parts, and incessant quality control make them the lowest cost units to own when initial cost is equated against service life...a fact your own service records will verify. Astute equipment buyers always specify Newcomb when they want the best. If you want to be *sure* you get the best—

FOR ECONOMICAL SERVICING

From start to finished product Newcomb transcription players and phonographs are engineered for prolonged service in an academic environment. When, however, service does become necessary—as it will with any electronic gear eventually—all parts are readily accessible. Hinged transcription player decks lift for tube replacement and motor maintenance.

DURABLE SERIAL NUMBER

Newcomb quality control after a machine is put in service is facilitated by the serial number assigned to each unit. It is stamped in metal so it cannot be obliterated and is riveted to the motor board. A durable serial number is essential in school service.

MORE POWER, LOWER DISTORTION

Newcomb "Bi-Coupled" output systems and broad-band output transformers provide more power at less distortion over a more complete band of useful frequencies. You will find Bi-Coupled systems only in Newcomb Series R and AV phonographs and transcription players.

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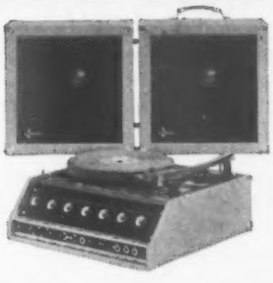
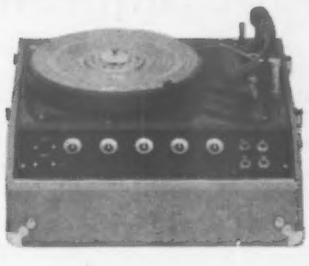
Newcomb Model R-164V portable combination transcription player/public address system has a 10 watt Bi-Coupled output system and a 12" round, dual-cone high fidelity loudspeaker, slanted and lighted operating panel with mixing controls and tone controls, 4-speed, variable-speed motor. Deck lifts for servicing. A tremendous value.



Newcomb Model TR-1656M-HF2 combines portability with exceptional coverage and high quality sound. This monophonic transcription player/p. a. system includes a GE variable reluctance magnetic cartridge, 56 watts peak Bi-Coupled output system, two two-way speaker systems. In addition to hinged deck, TR Series players have removable vent plate in bottom for under-chassis servicing.



Newcomb Model AVS-1624V STEREOPHONIC portable combination transcription player/p.a. system provides either true stereo or monophonic high fidelity reproduction at the flip of a switch. It plays any size, any speed record up to 17¼" masters, has stereo mike inputs, stereo tape or radio inputs, scratch filter, voice filters, separate mixing volume controls for phone and both mikes, separate bass and treble ganged tone controls, choice of 4 different speaker systems.

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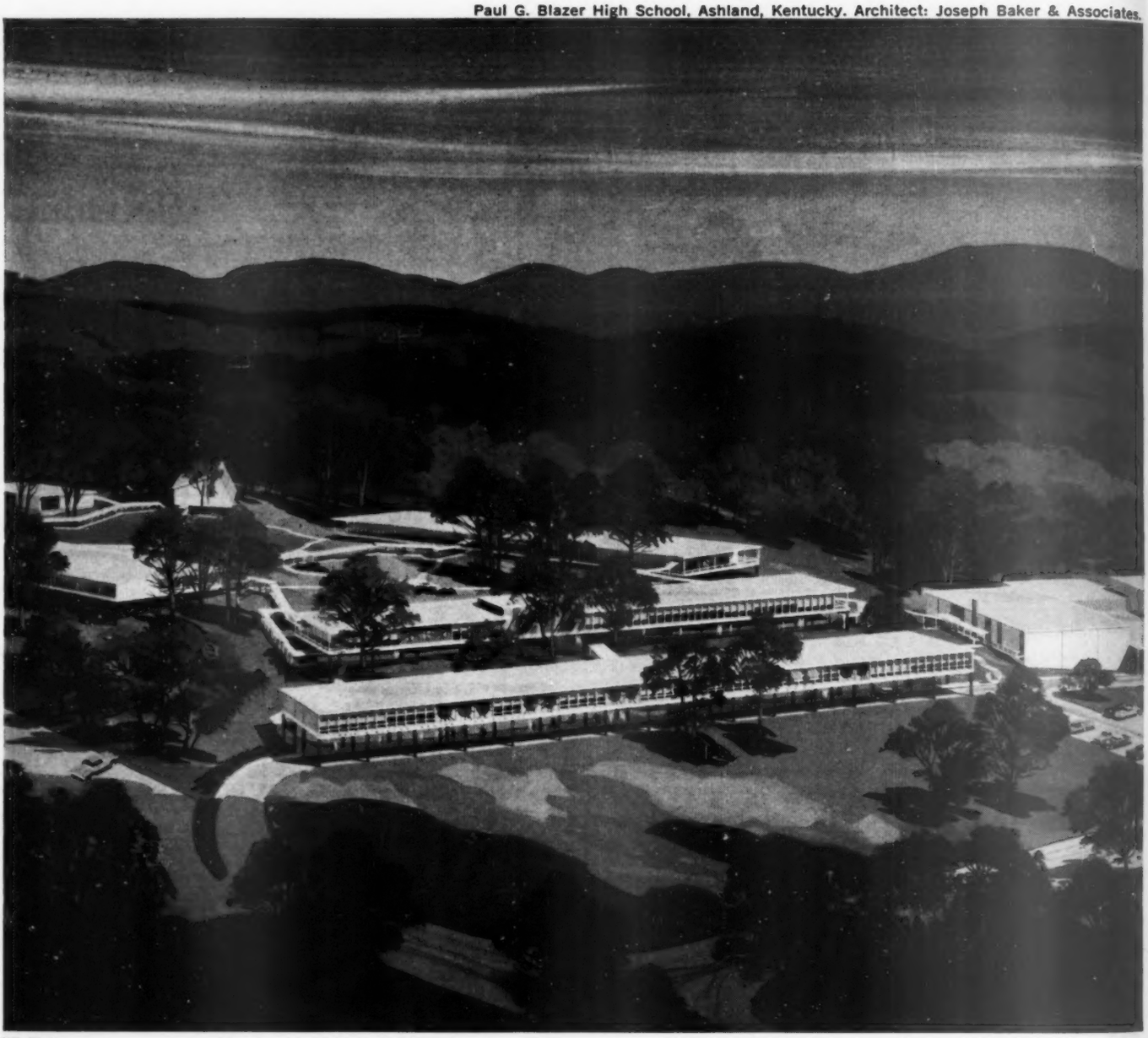
Paul G. Blazer High School, Ashland, Kentucky. Architect: Joseph Baker & Associates.



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continued from page 62

time for planning, for selecting teachers and training them. Otherwise, I think, bedlam might reign."

In training the faculty, three goals are important. First, the teachers should get to know many possible ways of developing a team-teaching program. They should be alert for ideas that can be adapted—and traps that can be avoided. Second, as their individual assignments are settled, they should begin to prepare lesson plans and materials. Third, they should have constant and controlled experience in working together in teams. Some psychological adjustments are inevitable, and these should be made as much as possible before the program goes into full action in the schools.

The faculty for Dundee was appointed in the summer of 1959. *"We had a program for a whole year in which we simply discussed, observed and questioned, so that the teachers would have a good, sound, solid feeling of what this whole concept means."* After that, the faculty was organized into teams and began the two-year process of formulating specific plans.

Two trial flights have also been made possible. At summer school sessions during the last two years, nine Dundee teachers offered a simplified team-teaching program for fifth and sixth graders. The response was heartening, though the real test is still to come.

"Team teaching can operate in almost any school building, but it can't live up to its full potential."

II. Building for team teaching

"Team teaching within limitations can operate in almost any school building, but it can't live up to its full potential unless the building has the proper spaces and facilities. A vast majority of the elementary schools being built today will probably not satisfy these needs."

The same belief has been stated even more emphatically by the Educational Facilities Laboratories, a nonprofit study and information center established by the Ford Foundation. EFL says bluntly: *

"All of the methods now being tried out in experimental team-teaching programs are severely handicapped when forced to function in the typical school building.

"Team-teaching programs all appear to require school space that provides several fundamental things not available in many schools today:

- The space must be able to accommodate groups of various sizes, anywhere from 100 students down to one or two children studying by themselves.
- The space must allow the rapid shifting of group size and the rapid changing of the participants of any group—continual motion throughout the school day is one inevitable result of team teaching.
- The space should include a place in which teachers can meet and work privately, and hopefully, a workroom for the preparation of special instructional materials.

"What these requirements mean in essence is that the educational barriers built into the conventional school building must be removed or significantly altered."

These requirements, EFL points out, can be met in two ways. 1) The school can be conceived as a single open space, to be subdivided at will by movable interior walls —or, in the case of at least one school, having no interior walls whatsoever. 2) The school can include permanently fixed areas of varying sizes to meet specialized needs.

Dundee Elementary School follows the second path. It will have permanent areas of six different sizes, ingeniously arranged so that all are easily accessible to every student. But within these fixed areas, as much flexibility as possible will be provided.

Perkins and Will, architects of the new school, have made flexibility their prime consideration. Here are some of the results:

- Flexibility will be insured, first of all, by the variety in area sizes. In addition, many of these areas can themselves be joined or subdivided by folding partitions. Various types of sound retardant partitions are now being tested, so that these operable walls will provide acoustical as well as visual privacy.

A grant from Educational Facilities Laboratories permitted the investigation of several designs.

- All communication facilities throughout the building have been designed for maximum flexibility. Chalk, tack and flannel boards will be interconvertible. Television sets and projector screens—both standard equipment in Dundee—

* *Schools for Team Teaching, a report from Educational Facilities Laboratories, Inc. New York City, 22. Free.*

will not be built into the walls. Rather, they can be hung in several different positions in each room.

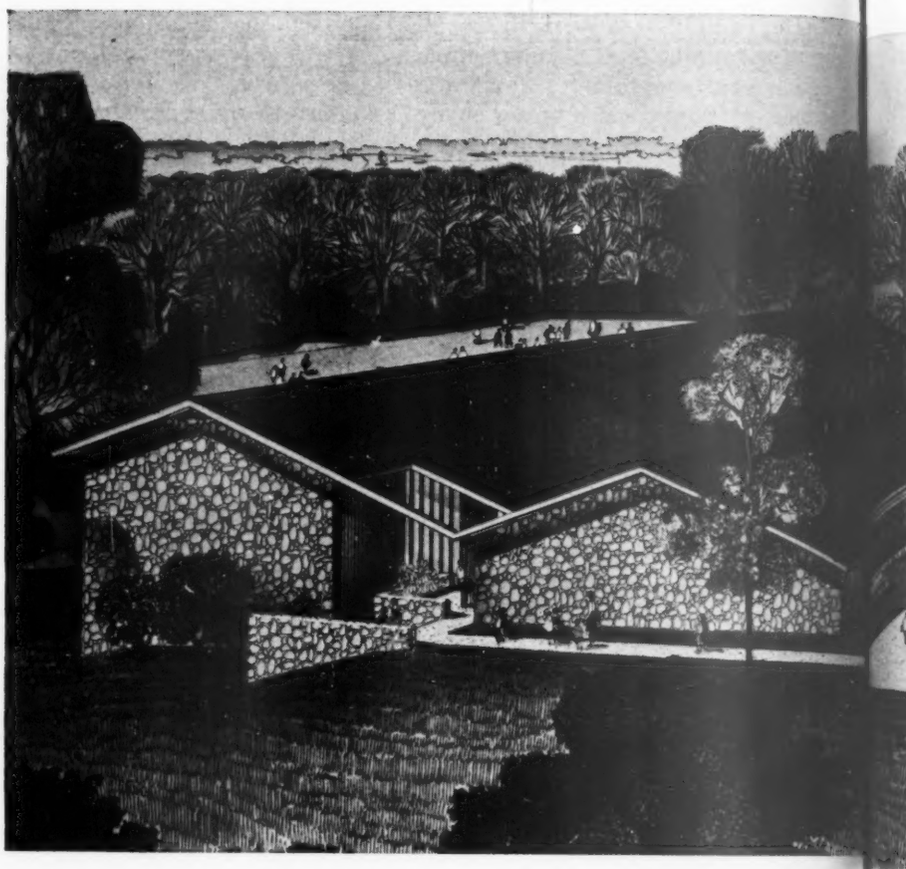
A dazzling array of audio-visual devices will be available. There will be facilities for closed circuit television, which can be broadcast from and received in any instructional area in the school. The same receivers can be used also for open circuit telecasts. Tape recorders, film projectors and other equipment will be readily at hand. Each room will have 10 electrical outlets, permitting it to use any combination of these facilities simultaneously.

■ Flexibility will also be built into the mechanical and electrical utilities of the building. A central conduit, for example, will be laid along the "spine" of the school, with an individual tap-off for each room. There will be no concrete-block partitions; the studs will be of hollow steel; and the ceilings will be removable for the adjustment or addition of conduits. Virtually any change or expansion of the utility systems will be feasible with a minimum of difficulty.

The architects estimate that Dundee's square footage (82 square feet per pupil) is 10% greater than would be required for a conventional school of the same quality. The extra space is devoted to areas, such as the team headquarters, that are needed only with team teaching. Construction costs for the 550-pupil school are estimated at $919,700, including the operable walls and the intricate communications system.

But suppose Greenwich should decide not to continue with team teaching. Would Dundee then be a dead loss?

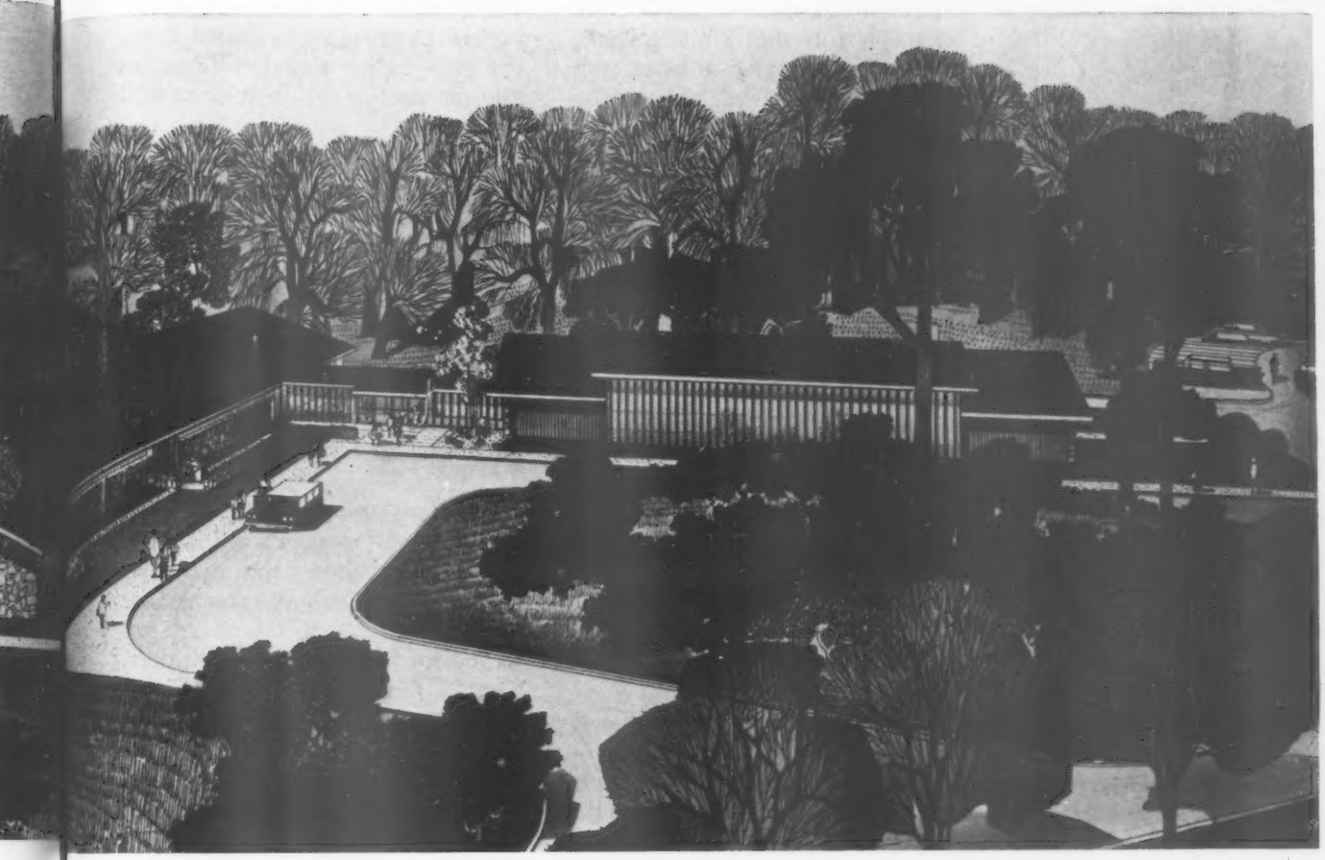
"Absolutely not," Dr. Smith replies. *"Quite apart from team teaching, it seems clear that there is going to be more variety of grouping and of teaching techniques in elementary schools in the years ahead. That's why flexibility is essential. No matter what direction education goes, Dundee ought to be able to adjust to it."* **End**



Dundee Elementary School

Architects: Perkins and Will

Dundee Elementary School will be built in a hilly, residential section of Greenwich, Conn., an upper-class suburb of New York City. The school has a student capacity of 550, including 100 kindergarteners. It is scheduled to open in September 1962.



1 Aerial view. Dundee consists of three adjoining structures. At the far left, built into the slope of the hill, is a two-story unit containing classrooms, team headquarters and small-group instructional areas. Immediately to the right is a one-story structure containing the large-group areas, the school offices and the library. At the far right, in a separate wing, are the gym/cafeteria and various service rooms.

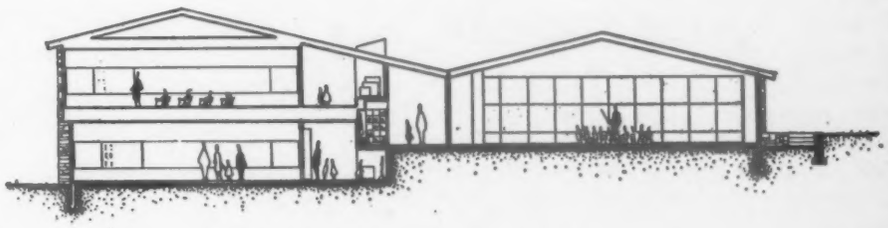
The glass-enclosed corridor between the large-group unit and the gym is the entrance to Dundee. Students entering there (or at the back door, which is recessed between the two large units at the other end of the building) will go to their coatrooms and then proceed directly to their first class, wherever it happens to be meeting that day. Except for kindergarteners and first graders, Dundee students will not have homerooms.

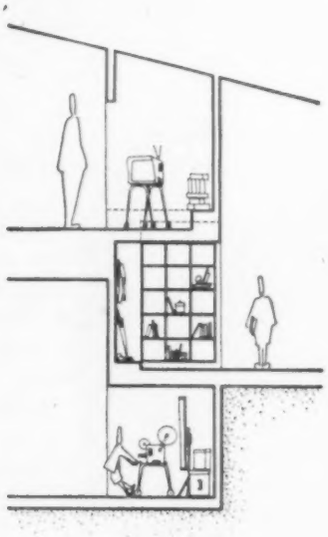
To blend with its residential environment, Dundee has fieldstone walls, interrupted by glass window-walls and sections of board-and-batten siding.

2-3 Storage and circulation spine. Linking the two large units is a "spine" of three corridors, one for each floor, which run the full length of the building. At both ends of these corridors are staircases; in the center of each is a row of coatrooms and storage closets.

Almost every day, Dundee students will be moving frequently among the various instructional areas, where they will meet with different teachers in different-sized groups. Kindergarteners and first graders will be introduced to this travel gradually. "But one of the things we learned in the team-teaching project at Lexington," says Dr. Smith, "is that youngsters, even at the lowest grade level, don't need the security and protection of one person all day long. We found that they adjusted very nicely to

2. Cross-section of the Dundee school





3. The storage spine as it might be used by different persons.

having more than one teacher during the day. They even looked forward to it."

To cope with this traffic, Dundee takes advantage of its position on the slope of a hill. The large-group areas are on a level exactly midway between the classroom areas (*see cross-section 2*). Children moving between any classroom and any large-group area will travel only a half-flight of stairs every way. This arrangement also makes it easier to move two groups of students simultaneously.

Except for the kindergartens, Dundee has no fixed classroom areas. Each room will be used by different groups and for different subjects during each day. It is therefore essential not to "freeze" the rooms by building in specialized and heavy equipment.

This requirement is met by the three-layer storage spine (*see cross-section 3*), which holds the audio-visual and other equipment, all large supplies and the students' personal belongings. The material to be used in each room will be readily accessible; and the rooms themselves will be virtually storage-free, uninterrupted educational spaces.

4-5 Large-group areas. Three large areas provide for instruction in groups of up to 300 children.

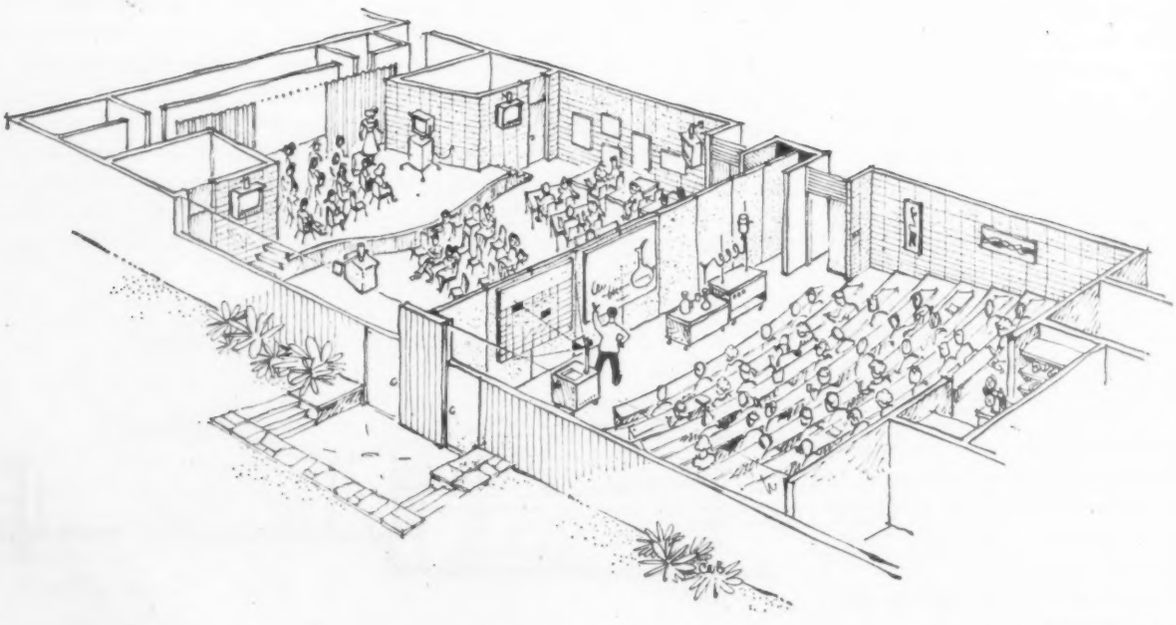
Two of these areas are separated by a folding partition (*see rendering 4*). At the left is a room with a low stage, which makes it suitable for demonstrations and play rehearsals as well as for regular large-group instruction. In this instance, it is being used for a closed circuit television lesson. At the right is a theatre with tiered seats for 100 pupils, designed especially for lectures, demonstrations and films. When the partition is folded back, the two rooms together form an auditorium that will seat up to 300 students.

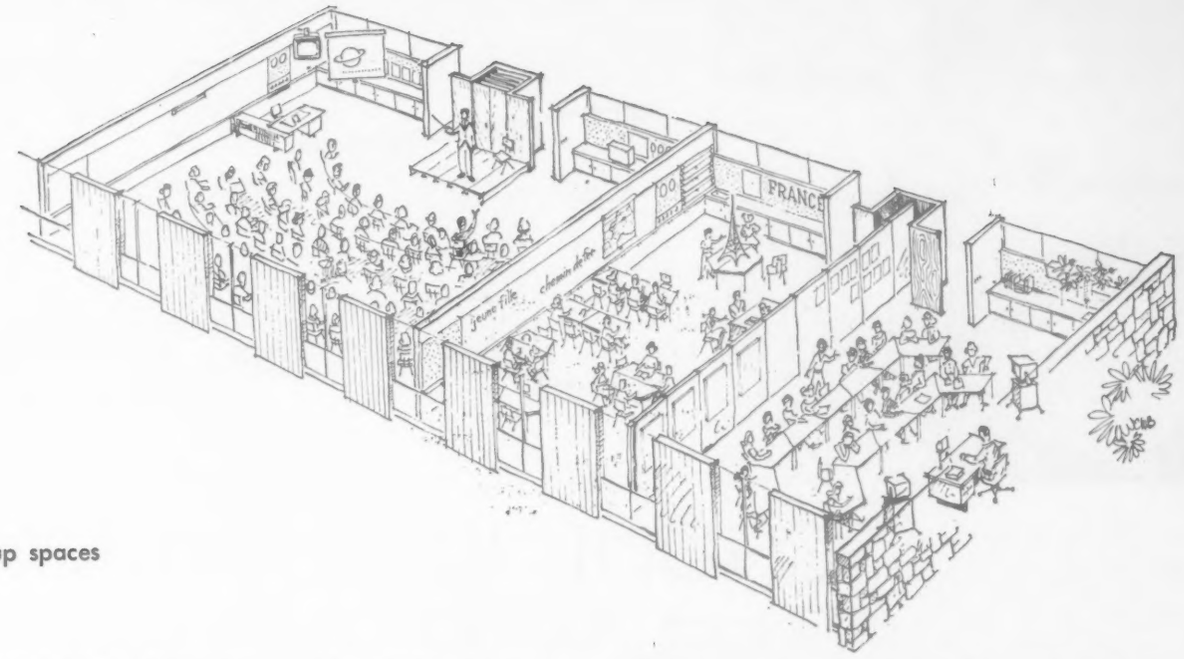
The third large-group area (*see rendering 5*) is a workshop with sinks, stoves, tools and art equipment, as well as cabinets in which individual projects can be stored. The room can be divided by a folding partition, so that different groups can be completely separated. This will be particularly important when noisy and quiet activities are under way at the same time.

6 Medium-group spaces. Sixteen classrooms of conventional size are ranged throughout the two-story unit. Two of these rooms are kindergartens; four others are reserved for first and second graders. None of these rooms have operable walls.

The remaining rooms are more flexible (*see rendering 6*). Each is about 750 square feet in area and will be conventionally equipped with movable furniture, display boards, sinks, etc. Eight of the rooms, however, are arranged in

4. Large group area is divided by folding screen





6. Medium-group spaces

pairs, separated by folding partitions. Larger spaces can thus be created almost at will—as for the science lessons being taught at the left.

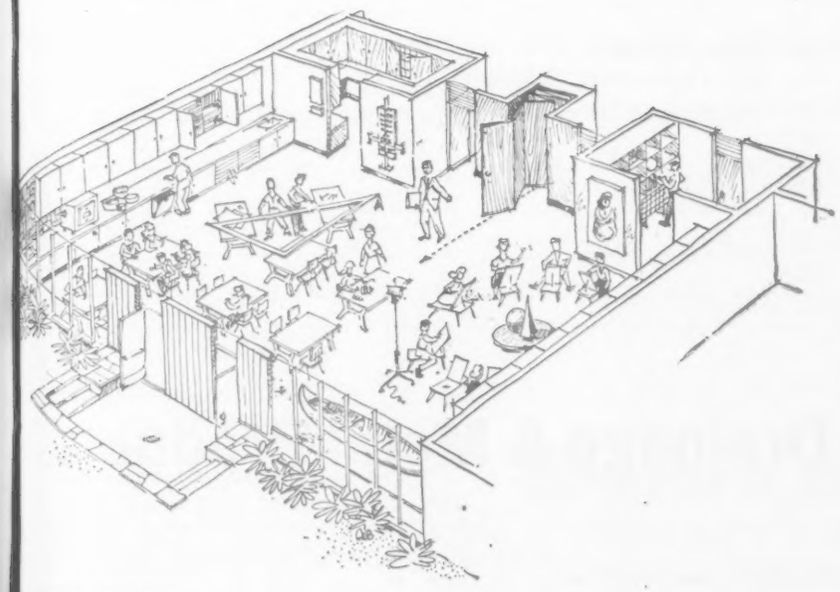
7 Team headquarters and small-group areas. The nerve center of a team-teaching school is the team headquarters, where teachers can meet in some privacy to develop their plans. At Dundee, four such offices are provided, in addition to a materials workshop and a lounge/conference room. Each headquarters (*see upper right*) is outfitted with desks, bookcases and filing cabinets; and each provides working space for the team's clerical assistant.

Adjoining these headquarters are four rooms designed for small-group instruction and independent study. Two of these are discussion rooms (*see lower left*), sparsely furnished except for a table and chairs. Each will accommodate a teacher and no more than 10 children. The two remaining rooms (*not illustrated here*) are equipped with individual carrels and with tape recorders, which the children can use for their language studies. A third set of carrels is built into the school library.

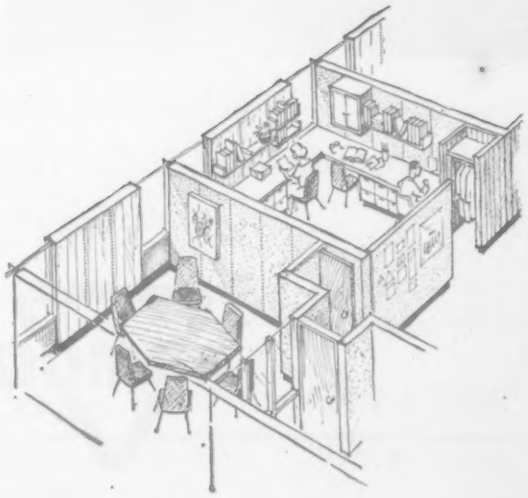
Library and resource center (*not illustrated*). Dundee's school library is housed in the one-story unit.

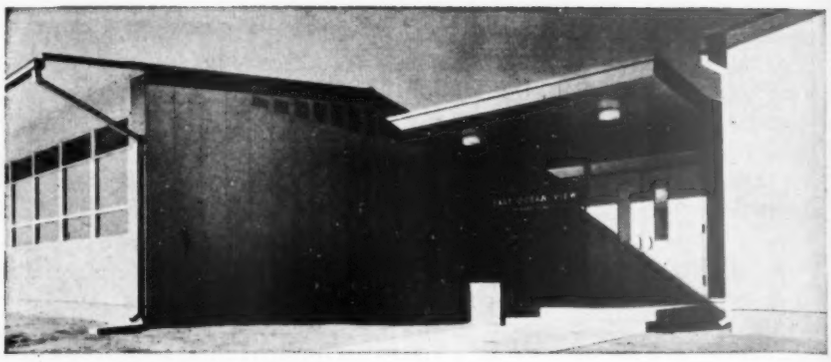
Adjoining the library—and functionally part of it—is a resource center for the students. Here will be stored language tapes and other instructional aids, to be borrowed as one borrows a library book. Here also will be the central controls for the school's closed circuit television equipment. **End**

5. Large group area is utilized by single class

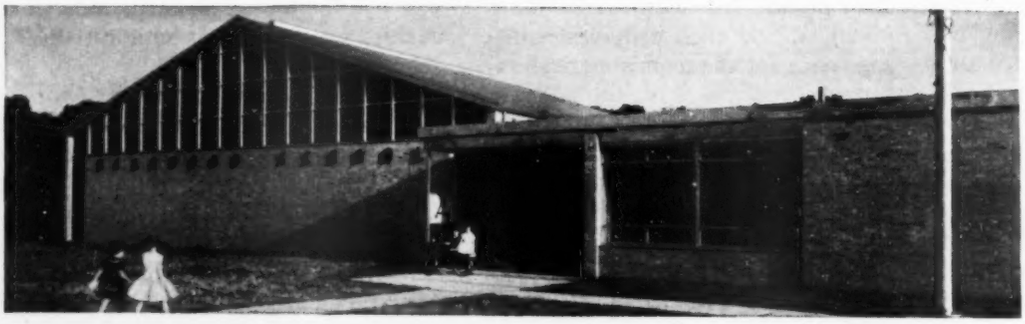


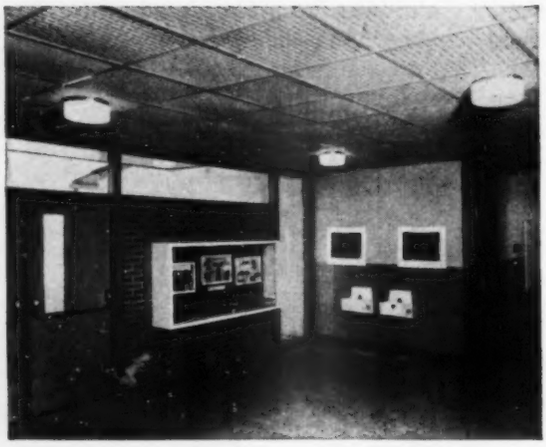
7. Team headquarters





SCHOOL BUILDINGS
From ARMCO Production Lines





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copy techniques to lower costs and expedite such work as charts, graphs, rush messages, legal documents and material only temporarily available. Techniques described may be applied to nearly all brands of photocopy equipment.

For a free copy of this booklet, circle number 864 on the Reader Service Card.

Free films. Association Films announces publication of its 1961-62 catalog, "Free Loan Motion Pictures and Selected Rental Subjects." The 48-page catalog presents an extensive listing of its free loan film library.

For a free catalog, circle number 895 on the Reader Service Card.

Storing instruments. A 24-page catalog illustrating safe storage for band equipment is available from Mutschler Brothers Co. The catalog shows storage compartments for instruments, uniforms, sheet music, folios and accessories.

For a free catalog, circle number 860 on the Reader Service Card.

Check your antenna. A television antenna checkup kit is being offered by the Channel Master Corp. The kit explains potential antenna trouble spots and tells what to do about rectifying difficulties.

For a free kit, circle number 875 on the Reader Service Card.

Using language labs. A booklet "To Learn A Language," published by Minnesota Mining and Manufacturing Co., is written for teachers and administrators who have never worked with a language lab. It outlines the lab approach, and introduces methods for using hi-fi tapes in the teaching of languages. Also included is a glossary of tape-recording terms.

For a free booklet, circle number 857 on the Reader Service Card.

Custodial materials. The Hadco Corp. is distributing a 12-page illustrated brochure which describes sanitation and maintenance products, finishes and chemical specialties. One of the items is an institutional carpet shampoo. The brochure also includes preventive maintenance programing aids.

For a free copy, circle number 880 on the Reader Service Card.

Stopwatch buying guide. Over 100 different timers, from basic stopwatches and split second timers to a synchronous chronoscope for measuring intervals up to 1/100 of a second, are described in this new catalog. It is offered by Heuer Timer Corp. Data and specifications on size, reading, operation and construction is given for each timer in the guide. Illustrations and prices are included.

For a free copy of the guide, circle number 891 on the Reader Service Card.

Dishwasher racks. Seco Co., Inc., has just issued a new 12-page catalog showing its complete line of dish-handling racks. The catalog lists the various size racks and compartments for glasses, cups, dishes and silverware.

For a copy of this catalog, circle number 901 on the Reader Service Card.

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(Circle number 720 for more information)

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Note imbedded Nylon plug... locks screws automatically
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(Circle number 752 for more information)

SM PRESS RELEASES

News from the business firms serving your schools

Lunar teaching aid

A bas-relief scale model of the moon is obtainable from Edmund Scientific Co. Measuring 12 inches in diameter, the model shows detailed surface formations including peaks, craters and the Ocean of Storms. Ideal for classroom study, it is possible to show moon

phases, or for an interesting effect, "black light" can be used on the model. The moon is made of washable plastic and can be marked-up without damaging the surface. The half which is invisible to the earth is smooth, but as more details are learned, they can be sketched in by the class.

For more information, circle number 874 on the Reader Service Card.

■ ■ ■

Classroom divider

Classroom space may be divided to handle varying numbers of students with a space dividing panel which rotates from the wall in a 180-degree arc. The panel, being marketed by Brunswick Corp., is held in place by a brake, can be used for extra display area.

For more information, circle number 881 on the Reader Service Card.

■ ■ ■

Vandal alarms

The Powers Regulator Co. makes two different alarm systems, each with its own emergency power supply. One is an audio setup for use in buildings during periods of nonoccupancy. Ultrasensitive microphones pick up sounds and vibrations on a signal unit. The signal is relayed to a monitor as far away as five miles. The monitor has a listening switch so that a guard can listen to the actual sounds.

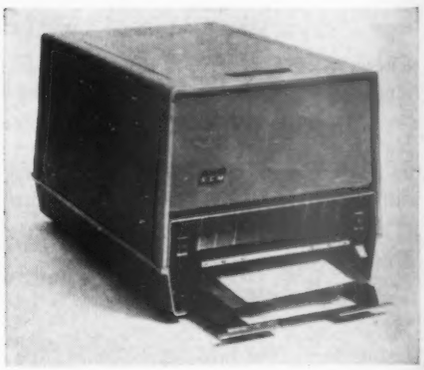
The other system is an electronic fence alarm. It transmits a low frequency wave to detect the appearance of intruders. A remote monitor picks up the signal and pinpoints the location of intrusion.

For more information, circle number 898 on the Reader Service Card.

■ ■ ■

Make own photocopies

On the market shortly, will be a desk-top size photocopy machine. Produced by Smith-Corona Marchant, Inc., it utilizes a sensitized paper which is electrically charged, exposed and developed in less than six seconds. The copy paper is automatically fed from a storage rack inside the ma-



chine. This eliminates the need for simultaneous handling of the original and the copy paper.

For more information, circle number 842 on the Reader Service Card.

■ ■ ■

Reinforces floors

Concrete flooring reinforced by steel is economical and saves time during construction using this steel deck developed by the Inland Steel Products Co.

The deck saves time because it can be used as a working platform right from the start. Time is also saved by the elimination of the usual concrete shoring operations. Separate bars, forms and all shoring are eliminated,

New from RCA—

Modern language teaching for all grades in every school!

RCA wheels in a new era in language teaching with the low-cost Mobile Language Laboratory. A completely self-contained unit, the RCA Mobile Laboratory is equipped to accommodate 10 students and instructor—in any classroom. Just roll it in, plug it in, and teach!

Simple? Yes, and versatile, too. The Mobile Lab is capable of performing all the functions of a regular Listen-Respond system: you can monitor and communicate with each student, record each student's performance. And it's all done with a single, never-so-simple-to-operate control panel. Student equipment consists of a combination headset, amplifier and microphone especially designed for low-level "close talking," so that the recitation of all ten students will not disturb other members of the class.

It's a remarkable unit that can be used at all grade levels. It can serve as the main laboratory, as a starter unit for the school that wishes to experiment, or as a supplement to an existing laboratory. The RCA Mobile Laboratory is remarkably priced, too—less than $1,000—for a complete 10-student laboratory!

Immediate demonstrations arranged without obligation. For details on this important addition to the RCA Educational Electronic Products line, write Radio Corporation of America, Meadow Lands, Pa.

RCA

The Most Trusted Name in Electronics

RADIO CORPORATION OF AMERICA

(Circle number 745 for more information)

and an economical gauge of steel can be used to bring about economy.

For more information, circle number 861 on the Reader Service Card.

■ ■ ■

Electric stapler

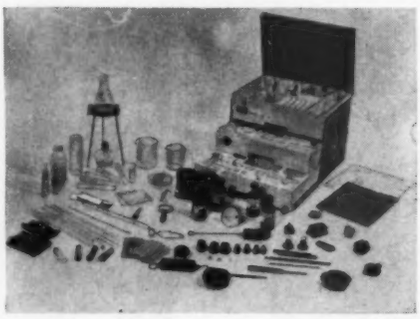
An automatic stapling machine put out by Staplex Co. will staple up to 25 sheets of 20 pound stationery. The staples are attached instantly, as fast as the papers are fed into the machine.

For more information, circle number 836 on the Reader Service Card.

■ ■ ■

Elementary science labs

A portable science lab kit, made by Central Scientific Co., is designed



for performing basic science experiments in the elementary school. Fundamental experiments in physics, chemistry, electricity, biology and mechanics can be performed by students. The illustrated manual and kit equipment are correlated with standard science textbooks. They may also be used at the junior high level.

For more information, circle number 892 on the Reader Service Card.

■ ■ ■

Assemble shelves quickly

Easy to assemble steel shelves are manufactured by Aurora Steel Products Co. The shelving consists of three parts: uprights, shelves and shelf supports. No nuts or bolts are used. Shelf supports lock into slots punched in the uprights. Optional parts are offered for arrangements of open, closed or bin-type shelving.

For more information, circle number 837 on the Reader Service Card.

■ ■ ■

Office tape recorder

A new office dictating and transcribing machine, utilizing tapes, is offered by Norelco. Dictation, transcription, rapid review, start and stop can be remotely operated with microphone controls. The mike also serves as a speaker for playback and dictation review. The machine is magazine loaded and weighs eight pounds. Telephone conversations may also be recorded on the machine.

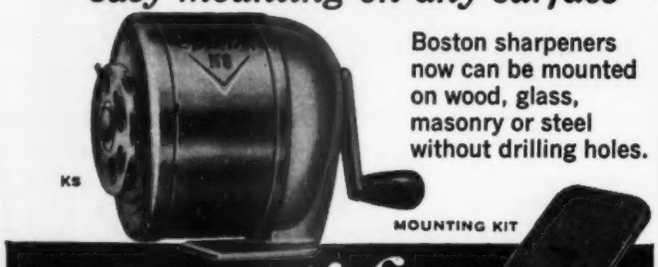
For more information, circle number 838 on the Reader Service Card.

■ ■ ■

Portable dance floor

Any room can be turned into a dance floor with interlocking sections of Masonite. Put together tongue-and-groove fashion, each sec-

easy mounting on any surface



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(Circle number 744 for more information)

tion is reversible, black on one side and brown on the other. A locking key fastens the sections together. For extra resiliency, the portable dance floor may be placed over carpeting.

For more information, circle number 902 on the Reader Service Card.

■ ■ ■

Playground covering

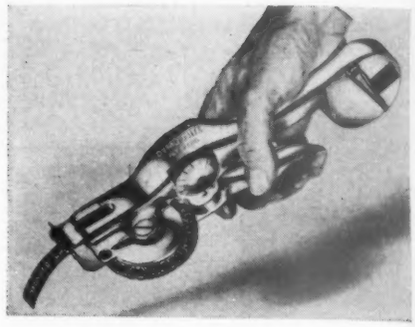
The Pacific Lumber Co. has announced plans to market a new redwood bark product for use in playgrounds and recreational areas. The specially processed redwood bark provides a permanent, resilient and shock-resistant ground cover requiring minimum maintenance.

For more information, circle number 900 on the Reader Service Card.

■ ■ ■

Branding iron

Dymo Industries Inc. makes a tape embossing device for labeling all kinds of school equipment. By dialing each letter and pressing the handle, raised letters are pressed into self-sticking plastic tape. The tape, available in various colors, feeds through the device for any length of



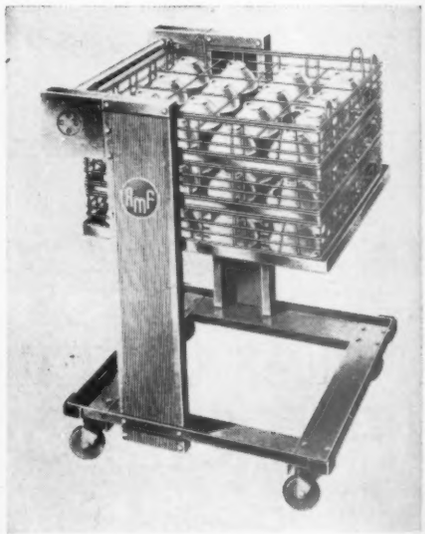
inscription. A built-in cut-off blade trims the label to the size desired. Tapes without adhesive backing and metal tapes are also available.

For more information, circle number 888 on the Reader Service Card.

■ ■ ■

Mobile cafeteria dispenser

Cups, glasses and trays are stored or transported to the service line with a wheeled dispenser manufactured by American Machine and Foundry Co. Supported by torsion springs, utensils and racks are always suspended at a constant level. The dispenser accom-



modates racks or trays of any size up to 20 inches square, and holds up to 12 dozen cups, 18 dozen glasses, or 150 trays.

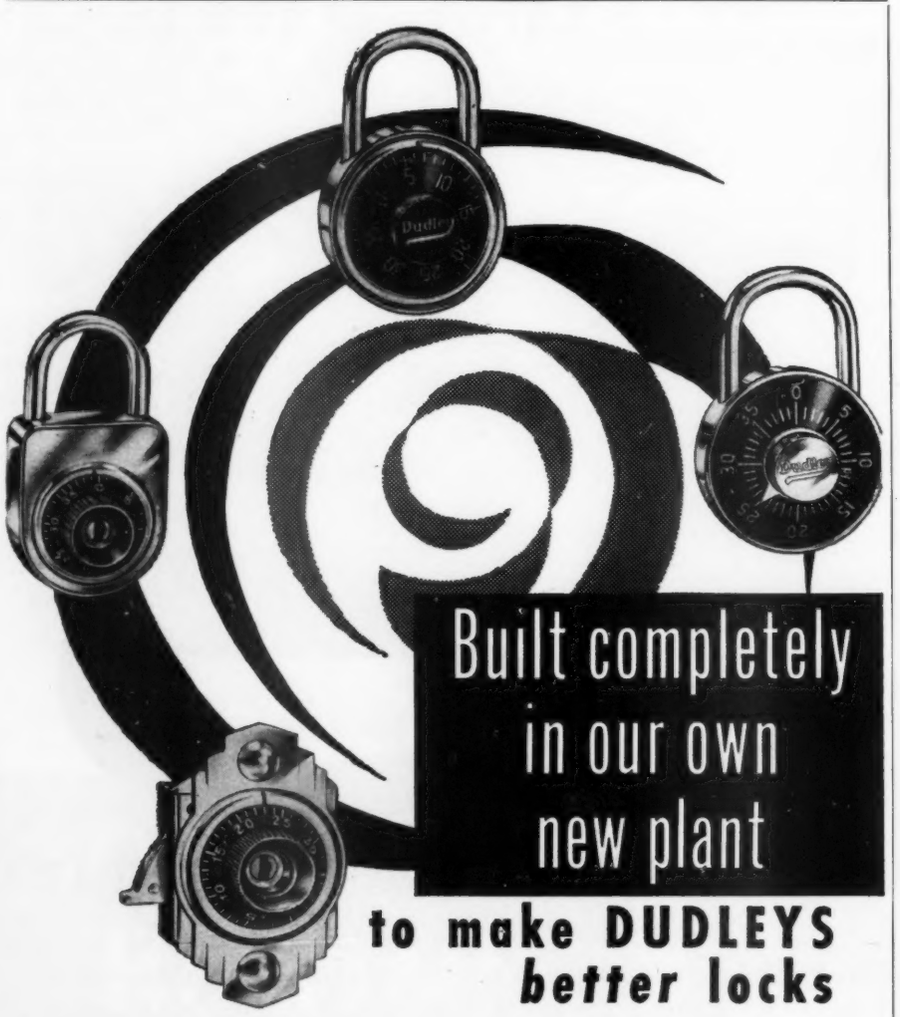
For more information, circle number 878 on the Reader Service Card.

■ ■ ■

Escape ladder

A folding aluminum fire escape that looks like a drainpipe is produced by Win-Chek Industries. It can be mounted outside any second- or third-story window, and is opened by flipping a catch. It will support 2,000 pounds and, for security, the ladder cannot be opened from ground level.

For more information, circle number 890 on the Reader Service Card.



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Whatever locks you need—built-in or padlock, revolving dial or revolving pointer, with or without quick-change combination control—all can be master-keyed and master-charted.

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Illustrated above, from bottom, S-540 Master-Keyed Built-In, P-570 Master-Keyed Padlock, RD-2 Padlock with revolving dial, RP-5 Padlock with revolving knob pointer.

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New 500 **Ekotape®** *Recorder-Reproducer*

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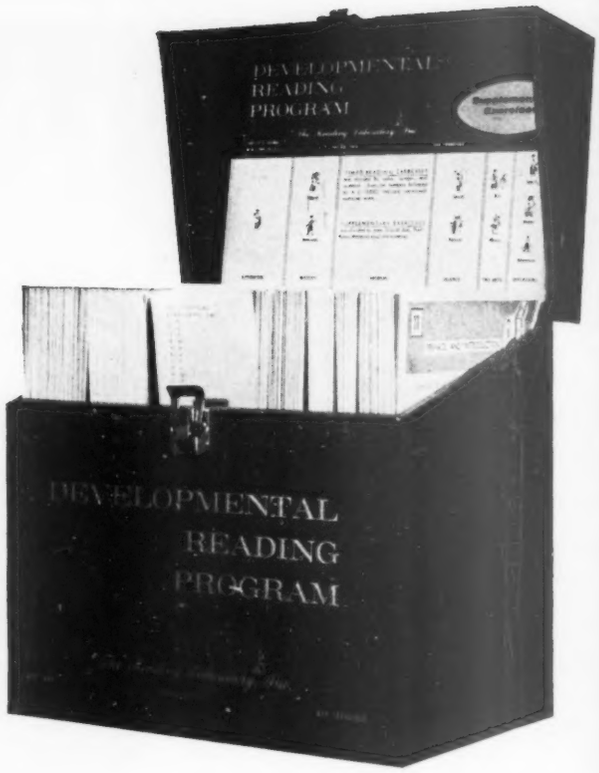

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EASILY ADMINISTERED. Your teachers will actually use this program, and will like to use it. No extra time or special knowledge required. No need to hire hard-to-find, hard-to-keep, costly specialists.

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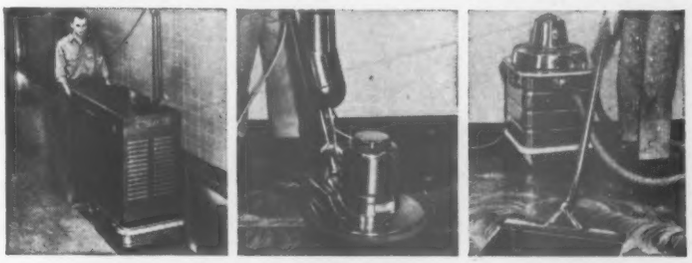

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John S. Monsos Adv.

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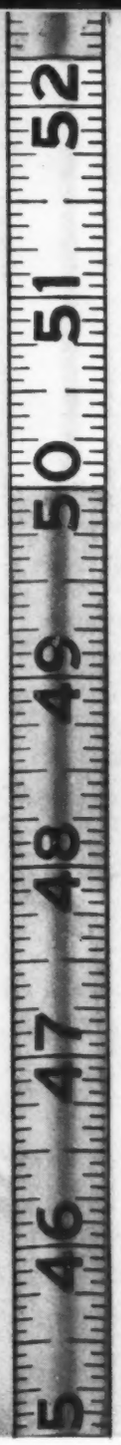

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